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**VT SERIES**

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# **CLASSIC**

## OPERATING GUIDE



**WARNING:** To prevent electrical shock or fire hazard, do not expose this appliance to rain or moisture.

## **1. GENERAL DESCRIPTION**

Our new VT Series Classic is the latest version of the ever-popular tube type Peavey Classic. This new unit has been totally redesigned from input to output, using the latest circuitry and utilizing the many design innovations incorporated into our larger and more powerful amps. The Automix function has been greatly simplified and made even more versatile than the previous system. New preamps with tremendously improved response and dynamic range have been designed into the new Classic. These preamps are comprised of the latest high speed integrated circuits which utilize transient protected field effect transistor front ends to optimize matching to guitar pickups and input dynamic range. Each of the two built-in preamps is voiced differently with the bright channel having somewhat more high frequency response than the normal channel. The bright channel features a single input, while the normal channel has both a high gain (A) and a low gain (B) input. The Automix jack serves as a special input between both channels and includes signal processing of the bright channel signal which is fed into the normal channel's input through the internal Automix connections. This effectively creates a kind of parallel/series arrangement enabling the bright channel to overdrive the normal channel, the gain control of the bright channel only moderately affecting the overdrive signal to the normal channel. This arrangement allows both a straight signal from the normal bright channel and a smooth overdrive signal from the normal channel, with selection being accomplished by use of the Automix remote footswitch (supplied).

The advanced circuitry features three bands of equalization with a very wide range of variation, thus enabling the performer to achieve almost any tonality desired. Our extremely effective middle control is able to create tone colorations to match the sound of most competing units very closely. The equalization circuitry is considerably more effective than that offered by most other manufacturers.

The new Classic features a new type of phase circuit that has been built into this unit. Because of our unique phase circuitry, we are able to achieve an extremely wide range of phasing effects, from extremely subtle colorations to very deep "swooshing" characteristic phasing sounds. We have designed a new and versatile oscillator circuit that is capable of modulating the phase effect from very slow and barely perceptible rates through the normal rates associated with conventional phasors and additionally, up through rates normally associated with traditional tremolo/vibrato circuits extending to the range normally associated with some rotating speaker systems. The tremendous range of the phase color and rate controls interact to yield what we think is the best phase circuit available either as an accessory or built into any amp to date.

The reverb follows the phasor circuitry and is controllable from the remote footswitch. Our new design utilizes an entirely different type of reverb unit and associated drive circuitry and produces an extremely deep reverb sound. The reverb return circuit has more than adequate gain to allow for various effects. Interesting sounds can be produced by using a touch of reverb in conjunction with the built-in phasor which can approximate the sound of certain rotating speaker systems.

We have included a master gain control to allow overall loudness/gain adjustment as well as to provide control of the dynamics of the preamp circuit.

## **2. FRONT PANEL**

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### **2.1. INPUTS**

The input consists of four standard phone jacks located at the extreme left-hand side of the front panel. The bright input jack is the single input for the bright channel. This jack works in the conventional manner and connects the signal from your instrument to the input stage of the bright channel. The normal channel inputs consist of a high gain (A) as well as a low gain (B) input to allow for a reduced gain input for handling signals that tend to overload the high gain (A) input. These two inputs will also permit two instruments to be connected to the normal channel. The Automix input is connected to the input of the bright channel whose output is connected through a signal processing circuit to the input of the normal channel, thus yielding our unique series/parallel arrangement.

### **2.2. BRIGHT GAIN CONTROL**

The bright gain control determines the sensitivity of the bright channel and in the Automix mode, determines the amount of clean signal sent to control circuits. It should be noted that the bright channel gain control can be used to set the overall level from that channel, both in normal operation and when used in the Automix mode.

### **2.3. NORMAL GAIN CONTROL**

Normal gain control sets the sensitivity of the normal channel and determines how much of the smooth distortion effect is mixed with the clean signal when in the Automix mode.

It should be noted that the bright and normal gain controls have a definite interplay relationship when in the Automix mode. Experimentation will illustrate the many subtle changes in dynamics that can be achieved through manipulation of these controls.

### **2.4. EQUALIZATION CONTROLS**

The type of equalization used in the VT Series has been researched very thoroughly and we have designed circuitry that is extremely versatile. You will find that our equalization settings will be somewhat different than those found on units made by other manufacturers although with proper adjustment, the VT's tonal circuitry can duplicate the tonality of most any amplifier.

#### **2.4.1. BASS EQUALIZATION CONTROL**

The bass equalization control determines the low frequency emphasis and is capable of substantially more effect than many of the more conventional passive tonal networks. For this reason, the control will tend to make the amp sound "bassy" at high settings. We have designed the circuitry to provide more tonal variation to allow you a greater range.

#### **2.4.2. MIDDLE EQUALIZATION CONTROL**

The middle equalization control is used to tailor the relative level of the vital mid-range frequencies. Experimentation with this middle control will show that it is very effective and enables the voicing of the amp to be changed significantly.

#### **2.4.3. TREBLE EQUALIZATION CONTROL**

The treble equalization control varies the high end response and is extremely effective. The treble control should provide more than adequate variation at high end response to compensate for lack of frequency response in your instrument or to achieve special tonal results.

#### **2.5. PHASE CONTROLS**

Phasing is a rather interesting effect that involves the introduction of a variable frequency notch in the amplifier's passband that produces very characteristic sounds. Many phasor circuits have been offered as separate accessory items but few have been offered as an integral part of musical instrument amplifiers. We have designed a unique phasing system into the VT Series. This phasor is capable of producing an extremely wide range of phasing effects, including tremolo/vibrato effects. When used with a touch of reverberation, it can closely approximate other popular sound effects such as those produced by rotating speakers, etc. We have designed an extremely wide-range oscillator circuit that is capable of very slow rates, as well as progressing to high rates closely associated with tremolo, as well as rates produced by rotating speakers. We have also built in a range of effects that vary from a very distinct "swooshing" phase to a very mild and subtle variation. Experimentation will show the extreme versatility of this built-in phase circuit.

#### **2.6. COLOR CONTROL**

The phase color control is the element that determines the amount of internal feedback that sets the level of the phasing effect. In the counter-clockwise position, very subtle changes may be heard, while extremely deep phasing effects with the accompanying characteristic "swooshing" sounds are obtained at the extreme clockwise setting. Experimentation will show the versatility of this circuit. Because of the unique action of this control, some degree of regeneration is introduced into the circuit in the extreme clockwise ("8", "9", "10") positions and you will note the most effect in the last quarter turn.

#### **2.7. RATE CONTROL**

The rate control determines the speed of the built-in phase oscillator. You will note that the speed is variable from extremely slow to extremely rapid, covering a far greater range than conventional phase or tremolo oscillators, in fact, effectively covering the operational range of both types. Counter-clockwise settings will produce an extremely slow speed, with advancing speed as the rate control is rotated clockwise. Please note that the rate control features an integral switch which is cut off in the full counter-clockwise position to allow the phase circuitry to cut completely out of the circuit from the front panel of the amp and without the footswitch. Please note that the phase circuitry will *not* work nor can it be controlled by the remote switch if the circuit is cut off with the switch on the rate control which takes precedence over the remote footswitch. NOTE: BECAUSE OF THE MODULATING ACTION OF THE PHASOR, IT IS A GOOD IDEA TO KEEP THE PHASE CIRCUIT CUT OFF WHEN NOT IN USE EITHER BY USE OF THE FOOTSWITCH OR WITH THE FRONT PANEL SWITCH ON THE RATE CONTROL TO AVOID MODULATING THE RESIDUAL NOISE FROM THE INPUT PREAMP; I.E., CUT THE PHASOR OFF WHEN NOT IN USE.

#### **2.8. MASTER REVERB**

To allow additional flexibility, the new reverb system in the VT Series is arranged in such a way that it follows the master volume control. Any signal coming from the master volume is sent to the reverb drive circuitry, which in turn drives the reverb spring. The signal return is amplified and remixed with the clear signal and is applied to the power amplifier which drives the loudspeaker.

The reverb master control determines the amount of gain in the reverb return amplifier. Because of the extremely strong reverb drive system, you will find that adequate reverb can be obtained at relatively low master reverb settings. We have provided significantly more pickup reverb gain in order to enable deep reverb effects that might be desirable from time to time, especially when using the reverb for coloration and enhancement of the phase effect. (Very interesting combinations can be found by using varying degrees of reverb when the phase circuit is operational. When the external footswitch is plugged into the rear panel, the reverb return signal can be turned off or on by the reverb switch.)

#### **2.9. MASTER VOLUME CONTROL**

The new VT Series Classic has the all important master volume. Many interesting effects can be achieved by using the master volume control in conjunction with the bright or normal gain controls. The most common of these effects is the creation of harmonic distortion and sustain by setting the front end gain controls at relatively high settings while running the master volume at relatively low settings, thus activating the smooth distortion circuitry built into the unit. The master volume control also affects the noise level of the amp. In studio type environments, where loud playing is not required, lower settings of the master volume will significantly improve the noise level of the amplifier making good quality recording possible.



## 2.10. PILOT LIGHT

The pilot light indicates when the electrical supply is switched on and is actually delivering power to the amplifier.

## 3. REAR PANEL

The rear panel contains the necessary fusing and power (mains) switches, as well as speaker outputs and a complete signal in/out jack panel. A small functional diagram has been printed on the rear panel to illustrate the functions of the various jacks.

### 3.1. FUSE

The fuse is located within the cap of the fuseholder and should be replaced with one of the proper type and value if it should fail. It is necessary that the proper type and value fuse be used to avoid damage to the equipment and to prevent voiding the warranty. If your unit repeatedly blows fuses, it should be taken to a qualified service center for repair.

### 3.2. POWER SWITCH

On domestic units, the power switch is of the three-position type with the center position being "OFF". This switch has two "ON" positions, one of which is used to ground the amplifier properly. One of the "ON" positions will yield the lowest amount of residual hum or "popping" when the instrument is touched and this is the position that should be used.

On export models, we utilize a simple on/off switch that does not have multiple "ON" positions since the grounding (earthing) conditions vary with the different electrical systems of North America versus other nations.

### 3.3. LINE CORD

For your safety, we have incorporated a three-wire line (mains) cable with proper grounding facilities. It is not advisable to remove the ground pin under any circumstances. If it is necessary to use the amp without proper grounding facilities, suitable grounding adaptors should be used. Much less noise and greatly reduced shock hazard exists when the unit is operated with the proper grounded receptacles.

### 3.4. SPEAKER OUTPUTS

The speaker outputs utilize standard phone jacks and both 8-Ohm and 4-Ohm taps are provided off the output transformer, enabling an extremely wide range of speaker systems to be used. Please be aware that impedance mismatching has a definite effect on the overall performance of the unit.

### 3.5. REMOTE SWITCH SOCKET

The remote switch socket is the standard "DIN" type and serves as the chassis connection for the supplied remote footswitch. Please note that the "DIN" plug has an indentation that must be mated with the matched indentation in the footswitch receptacle on the rear panel. This keying action allows the footswitch to be connected only in the proper manner. If the plug is forced or undue pressure is exerted on the shell or pins, damage could result to the footswitch plug or the chassis mounted socket. As with any precision device, reasonable care should be exercised when connecting and disconnecting the remote switch.

### 3.6. PREAMP OUT/POWER AMP IN

To allow "in line" patching of various accessories, we have included a unique system of preamp out/power amp in jacks on the rear panel. The preamp out is the straight preamp signal which is the sum of the clear signal plus reverb. This output signal level is approximately 2 Volts RMS and is a relatively low (600 Ohms) output impedance. The preamp output signal is connected through an internal switching contact to the power amp input jack and normally the preamp out is internally connected to the power amp input. This circuit allows basically two modes of operation. When signal is taken out of the preamp, signal is simultaneously also delivered to the internal power amplifier. If access is needed to the internal power amplifier or if some accessory device such as a noise gate, delay line, etc., is patched "in line", then the *preamp output* signal must be connected to the *auxiliary unit's input*, while the *auxiliary unit's output* must be connected to the *power amp input*, thereby placing the auxiliary unit in series or "in line" with the normal signal path. With this unique patching facility, many interesting effects can be accomplished.

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#### Power Output:

50 Watts RMS @ 5% THD into 4 Ohms

#### Gain:

55 dB (EQ Flat)

#### Signal to Noise Ratio:

75 dB (Volume 12:00, Master 12:00)

#### Preamp Output:

2 Volts RMS

Minimum Input Voltage For Rated Output:

50 mV

**"Specifications are subject to change without notice."**



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