VELOCITY®

HIGH VOLTAGE TUBE/60W COMBO AMPLIFIER **VT60**

U S E R ' S M A N U A L

ROCKTRON CORPORATION

! WARNING !

The Velocity® VT60 is capable of producing extremely high sound pressure levels. The use of ear protection is essential in situations when prolonged exposure to such high sound pressure levels occurs. Failure to use caution and/or ear protection when using this amplifier may result in permanent hearing impairment or hearing loss. United States Government guidelines concerning safe noise exposure levels should be referred to before operating the amplifier at high levels. The manufacturer is not responsible for any damage resulting from the use of this product.

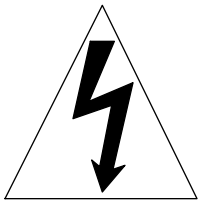
UNPACKING

Upon unpacking the Velocity® VT60, save the carton and all the packing materials in case it becomes necessary to ship the unit.

Be sure to thoroughly inspect your unit and its carton for any signs of damage that may have occurred during shipment. If there are any signs of damage, contact your dealer immediately.

OPERATING TEMPERATURE

Do not expose this unit to excessively warm or cold temperatures. This unit is designed to operate between 32°F and 104°F (0°C and 40°C). This unit may not function properly under extreme conditions.



The lightning flash with arrowhead symbol, appearing on the rear panel of the unit, is intended to alert the user of this product of the presence of uninsulated, dangerous voltage which may be of sufficient magnitude to constitute a risk of electric shock.

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

The exclamation point symbol, which appears on the rear panel of the unit, is intended to alert the user of this product to the presence of important operating and maintenance instructions in the accompanying literature.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

Contents

CE

Your Velocity VT60 has been tested and complies with the following Standards and Directives as set forth by the European Union:

Council Directive(s): 89/336/EEC, 73/23/EEC

Standard(s): EN55013, EN50082-1, EN60065

This means that this product has been designed to meet stringent guidelines on how much RF energy it can emit, and that it should be immune from other sources of interference when properly used. Improper use of this equipment could result in increased RF emissions, which may or may not interfere with other electronic products.

To insure against this possibility, always use good shielded cables for all audio input connections. This will help insure compliance with the Directive(s).

Introduction

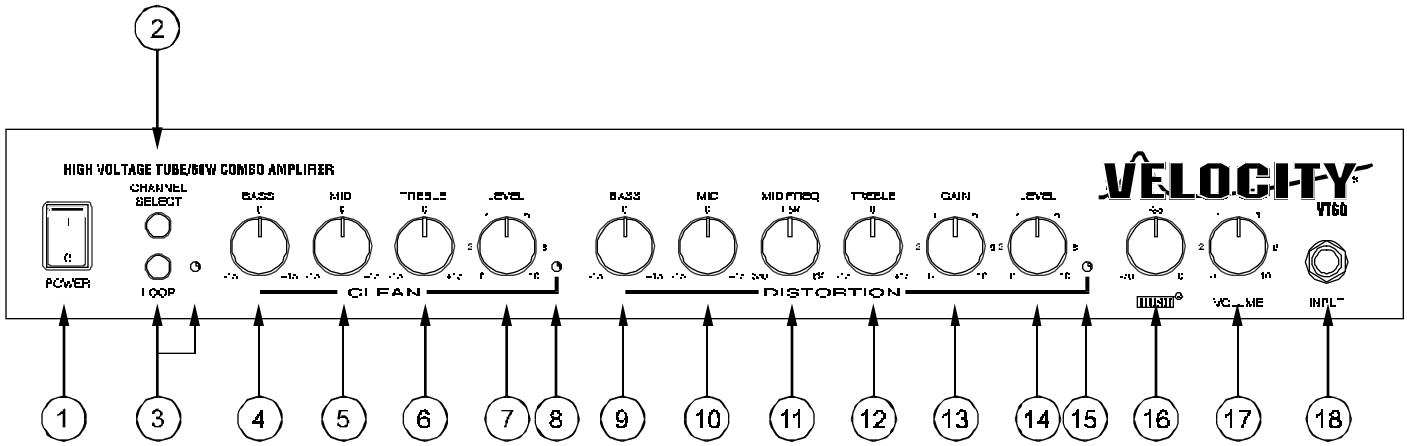
Congratulations on your purchase of the Velocity® VT60 guitar combo amplifier!

The VT60 features:

- *A slanted speaker baffle for better sound projection*
- *An indestructable 60 watt power chip featuring self peak instantaneous temperature protection as well as output protection from shorts to ground.*
- *Sweepable mid range frequencies for wide tonal range*
- *HUSH® noise reduction with V.I.R. circuitry*
- *High voltage twin 12AX7s for high headroom*
- *Toroid transformer for quiet operation*
- *Dual footswitch functions for channel switching and loop on/off*
- *Switchable effects loop*
- *Volume pedal jack for easy master control*

For a thorough explanation of the VT60 and its features, please read this manual carefully and keep it for future reference.

Front Panel



1 POWER switch	*This switch powers up the Velocity VT60.*
2 CHANNEL SELECT switch	*This switch selects which channel is currently active (Clean or Distortion).*
3 LOOP switch	*This switch determines whether the effects loop is currently active.*

CLEAN Channel Controls

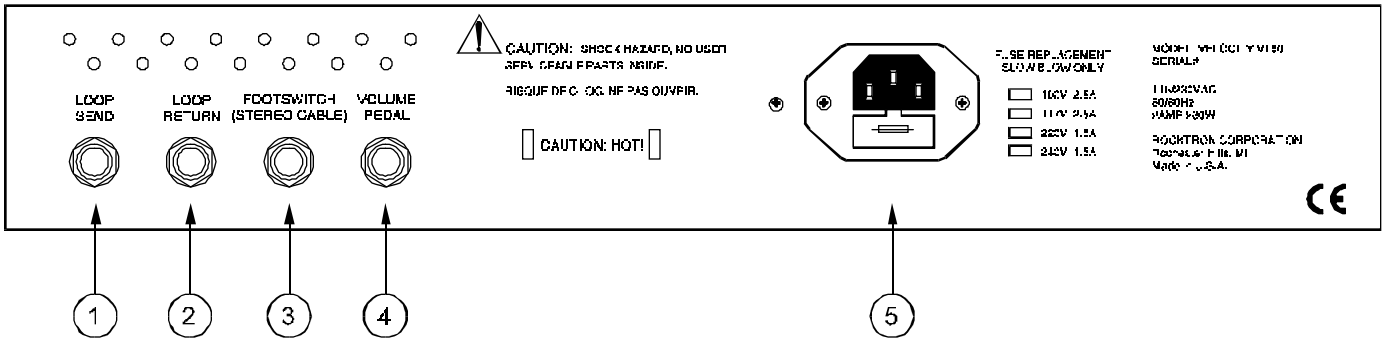
4 BASS control	*This control determines the amount of low frequency information in the Clean channel, and is adjustable over a range of ±15dB.*
5 MID control	*This control determines the amount of mid frequency information in the Clean channel, and is adjustable over a range of ±15dB.*
6 TREBLE control	*This control determines the amount of high frequency information in the Clean channel, and is adjustable over a range of ±15dB.*
7 LEVEL control	*The LEVEL control determines the output level of the Clean channel, independent of the Distortion channel.* *Note: The Clean channel LEVEL control drives the input to the tube stage, and can therefore generate distortion when set to extremely high levels.* *To maintain the cleanest channel possible, it is important to set the Master VOLUME control (17) to higher levels when more volume is required (instead of changing the individual channel LEVEL controls). The Clean channel LEVEL control should then be used to set the level of the clean channel relative to the level of the Distortion channel.*
8 CLEAN LED	*When lit, the CLEAN L.E.D. indicates that the Clean channel is currently active.*

DISTORTION Channel Controls

9 BASS control	*The BASS control determines the amount of low frequency information in the Distortion channel, and is adjustable over a range of ±15dB.*
10 MID control	*The MID control determines the amount of mid frequency information in the Distortion channel, and is adjustable over a range of ±15dB.*
11 MID FREQ control	*The MID FREQ control determies the center frequency to be cut or boosted by the MID control, and is adjustable over a range of 350Hz to 6kHz.*
12 TREBLE control	*The TREBLE control determines the amount of high frequency information in the Distortion channel, and is adjustable over a range of ±15dB.*
13 GAIN	*The GAIN control determines the amount of gain in the Distortion channel. Higher levels of gain increase distortion and sustain.*
14 LEVEL control	*The LEVEL control determines the output level of the Distortion channel, independent of the Clean channel.*
15 DISORTION LED	*When lit, the DISTORTION L.E.D. indicates that the Distortion channel is currently active.*

16 HUSH control	*The HUSH® control determines the threshold level for the internal HUSH® noise reduction. For an explanation of HUSH and how it operates, see page 5.*
17 VOLUME control	*The VOLUME control determines the overall output level of the VT60.*
18 INPUT jack	*This ¼" mono jack accepts the output from a guitar.*

Rear Panel



1 LOOP SEND jack

The LOOP SEND jack provides an output from the VT60 effects loop to be fed to the input of an effects device (or the input of the first effects device in a chain of such devices).

2 LOOP RETURN jack

The LOOP RETURN provides an input to the VT60 effects loop which accepts the output of an effects device (or the output of the last effects device in a chain of such devices).

3 FOOTSWITCH (STEREO CABLE) jack

This jack accepts a stereo (RTS) ¼" cable from a dual function footswitch, which can then be used to control the current channel and loop on/off status by remote means.

4 VOLUME PEDAL (STEREO CABLE) jack

The VOLUME PEDAL jack accepts the ¼" stereo (RTS) output from a volume pedal.

5 Power Inlet module

The Power Inlet module accepts the detachable power cord included with the unit, and also houses the main fuse for the unit. (Always replace with slow blow fuse indicated on panel.)

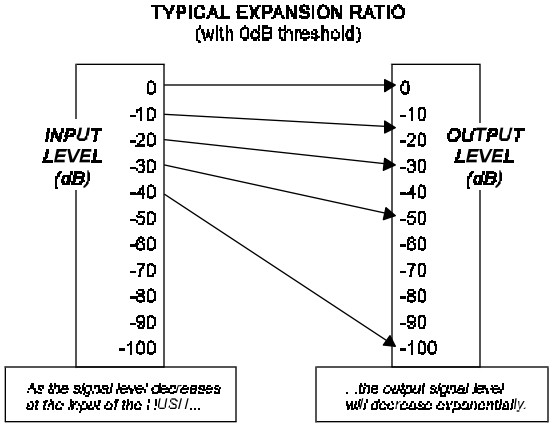
About HUSH®

HUSH® is Rocktron's patented single-ended noise reduction system.

The low-level expander of the HUSH system operates like an electronic volume control. The analog version of HUSH utilizes a voltage-controlled amplifier (VCA) circuit which can control the gain between the input and the output from unity to 30, 40 or even 50dB of gain reduction.

When the input signal is above the user-defined threshold level, the VCA circuit remains at unity gain (i.e., the amplitude of the output signal is equal to that of the input signal). As the input signal level drops below the user-defined threshold level, downward expansion begins. At this point the expander acts like an electronic volume control and gradually begins to decrease the output signal level relative to the input signal level. As the input signal drops further below the threshold point, downward expansion increases. A drop in the input level by 20dB would cause the output level to drop approximately 40dB (i.e., 20dB of gain reduction). In the absence of any input signal, the expander will reduce the gain so that the noise floor becomes inaudible.

The figure below shows the typical expansion ratio for various input levels.

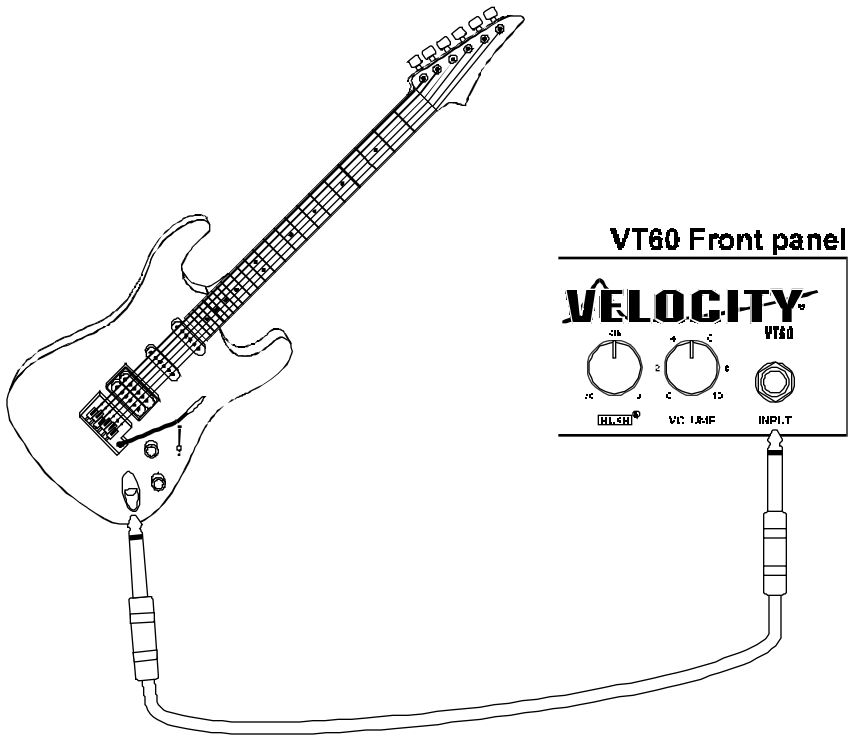


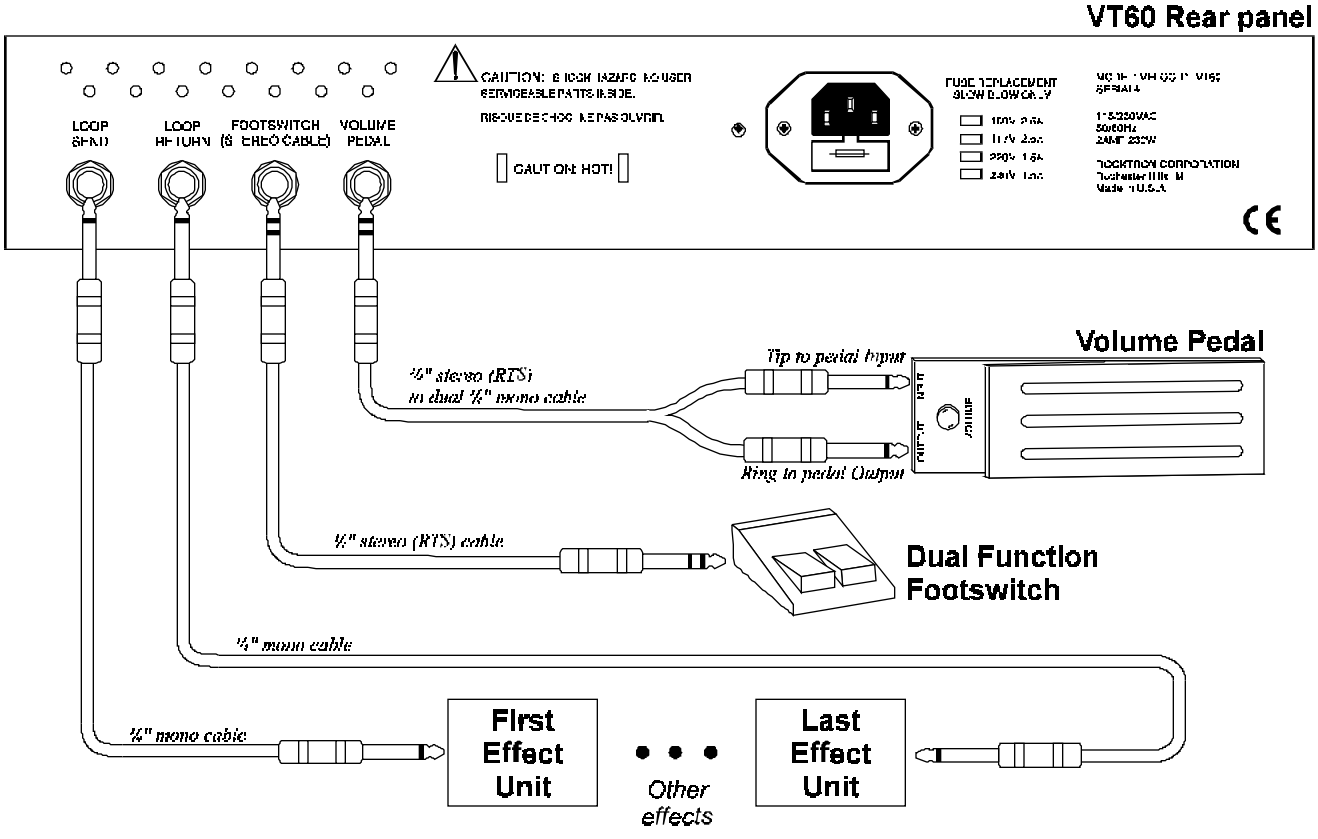
V.I.R. Circuitry

The HUSH included in the VT60 also incorporates patented V.I.R. (Variable Integrated Release) circuitry, which intelligently tracks the guitar signal. Long, sustained notes are allowed to decay naturally without being cut off, while quick, muted notes release quickly without a trail of noise following.

The HUSH threshold is adjustable via the front panel HUSH control. When set at its lowest threshold setting (-70), the HUSH circuit is not active.

Connections





Specifications

Maximum Input	**+20dBu**
Input Impedance	**470kΩ**
3-Band Parametric	**±15dB (Bass, Mid, Treble)**
Mid Band Frequency	**350Hz - 6kHz (variable)**
Gain	**over 80dB available on distortion channel**
Power	**60 watts**
HUSH Noise Reduction	**over 50dB available noise reduction**
Dimensions	**21" x 20.25" x 10.5"**
Speaker	**12" 8Ω Eminence (custom-made)**

CE

CE Approved

ROCKTRON
CORPORATION

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