

VELOCITY[®]120

GUITAR POWER AMPLIFIER

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

ROCKTRON
C O R P O R A T I O N

May be covered by one or more of the following:

U.S. Patents #4538297, 4647876, 4696044, 4745309, 4881047, 4893099, 5124657, 5263091, 5268527, 5319713 and 5333201.

Other patents pending. Foreign patents pending.

! WARNING !

The Velocity® 120 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® 120, save the carton and all the packing materials in case it becomes necessary to ship the unit.

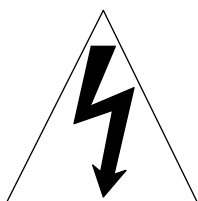
Be sure to thoroughly inspect your unit and its carton for any signs of damage that may have occurred during shipment. If there are any signs of damage, contact your dealer immediately.

INSTALLATION

When installing the Velocity® 120 in your rack, it is best for ventilation and heat dissipation that the unit occupy the bottom space of your rack. It is also recommended that a vacant space is left above the power amp, if possible, to further improve ventilation.

OPERATING TEMPERATURE

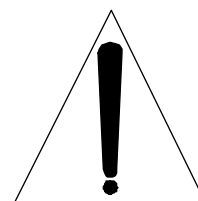
Do not expose this unit to excessively warm or cold temperatures. This unit is designed to operate between 32°F and 104°F (0°C and 40°C). This unit may not function properly under extreme conditions.



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

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Introduction

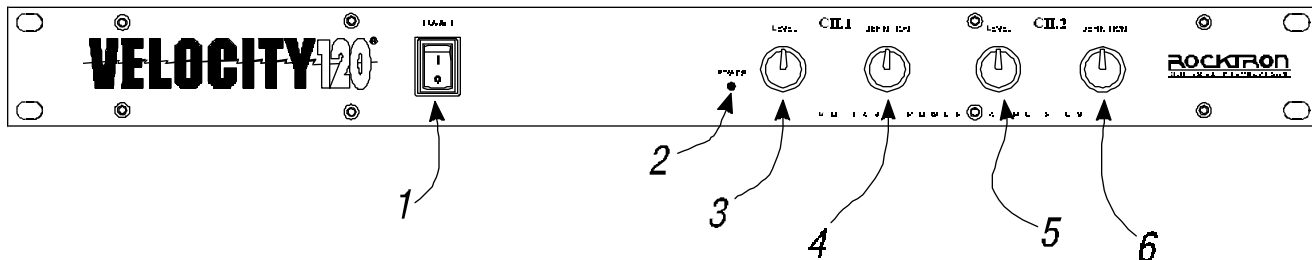
Congratulations on your purchase of the Velocity® 120 guitar power amplifier! Designed to provide maximum reliability under even the most extreme conditions, the single-rack space Velocity® 120 provides 60 watts per channel stereo or 120 watts mono-bridged when driving an 8 ohm load.

The 120 incorporates an automatic short-detection circuit which, if a short should occur, will automatically shut the unit down before any damage can be done to any of its internal components. Once the problem is detected and corrected, the unit can be turned back on and will operate normally.

In addition, the amplifier also provides a front panel Definition control for each channel. This control adjusts a specific pre-defined frequency range which will allow the guitar to be better distinguished from other instruments when playing with a band.

This User's Manual details various applications and functions for the Velocity® 120. After reading it, please keep it for future reference.

Front Panel



- ## 1 POWER switch

This switch powers up the Velocity® 120.

- 2 POWER led**

When lit, this LED indicates that the Velocity® 120 is powered and ready for operation.

- ### 3 LEVEL control

This control determines the output level for Channel 1.

- #### 4 DEFINITION control

This control determines the level of definition for Channel 1. Turning this control fully counter-clockwise bypasses the Definition circuit, while turning it fully clockwise provides maximum Definition.

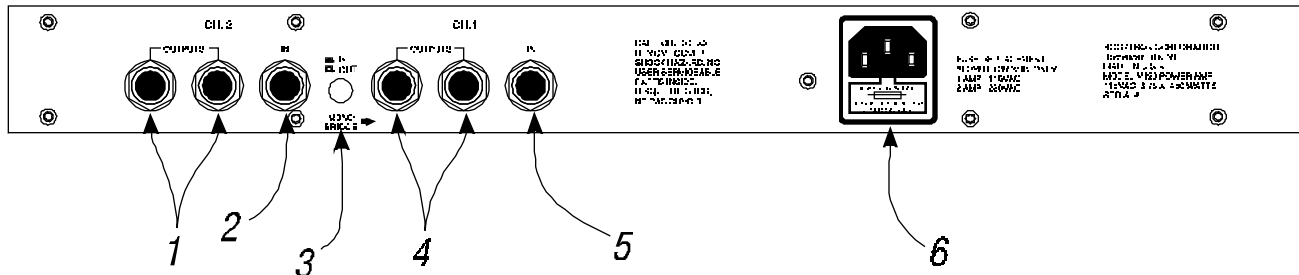
- ## 5 LEVEL control

This control determines the output level for Channel 2.

- ## 6 DEFINITION control

This control determines the mid frequency content for Channel 2. Turning this control fully counter-clockwise bypasses the Definition circuit, while turning it fully clockwise provides maximum Definition.

Rear Panel



1 OUTPUT jacks (Ch. 2)

These standard 1/4" jacks provide outputs for Channel 2 to speaker cabinets. Do not connect these outputs to a load of less than 4 ohms (or less than 8 ohms in mono-bridged mode). These jacks are inoperable when using the Velocity® 120 in "bridged" mode (i.e MONO BRIDGE switch "in").

2 INPUT jack (Ch. 2)

This standard 1/4" jack provides an input to Channel 2 from the output of your preamp or the last device in your effects chain.

This jack is inoperable when using the Velocity® 120 in "bridged" mode (i.e MONO BRIDGE switch "in").

3 BRIDGED MODE selector switch

When pressed "IN" the Velocity® 120 operates as a mono unit with increased output power (Channel 2 becomes inoperable in this condition).

In the "OUT" position the unit operates as a normal stereo amplifier.

4 OUTPUT jacks (Ch. 1)

These standard 1/4" jacks provide outputs for Channel 1 to speaker cabinets. Do not connect these outputs to a load of less than 4 ohms (or less than 8 ohms in mono-bridged mode). These jacks are the operable output jacks when using the Velocity® 120 in "bridged" mode.

5 INPUT jack (Ch. 1)

This standard 1/4" jack provides an input to Channel 1 from the output of your preamp or the last device in your effects chain.

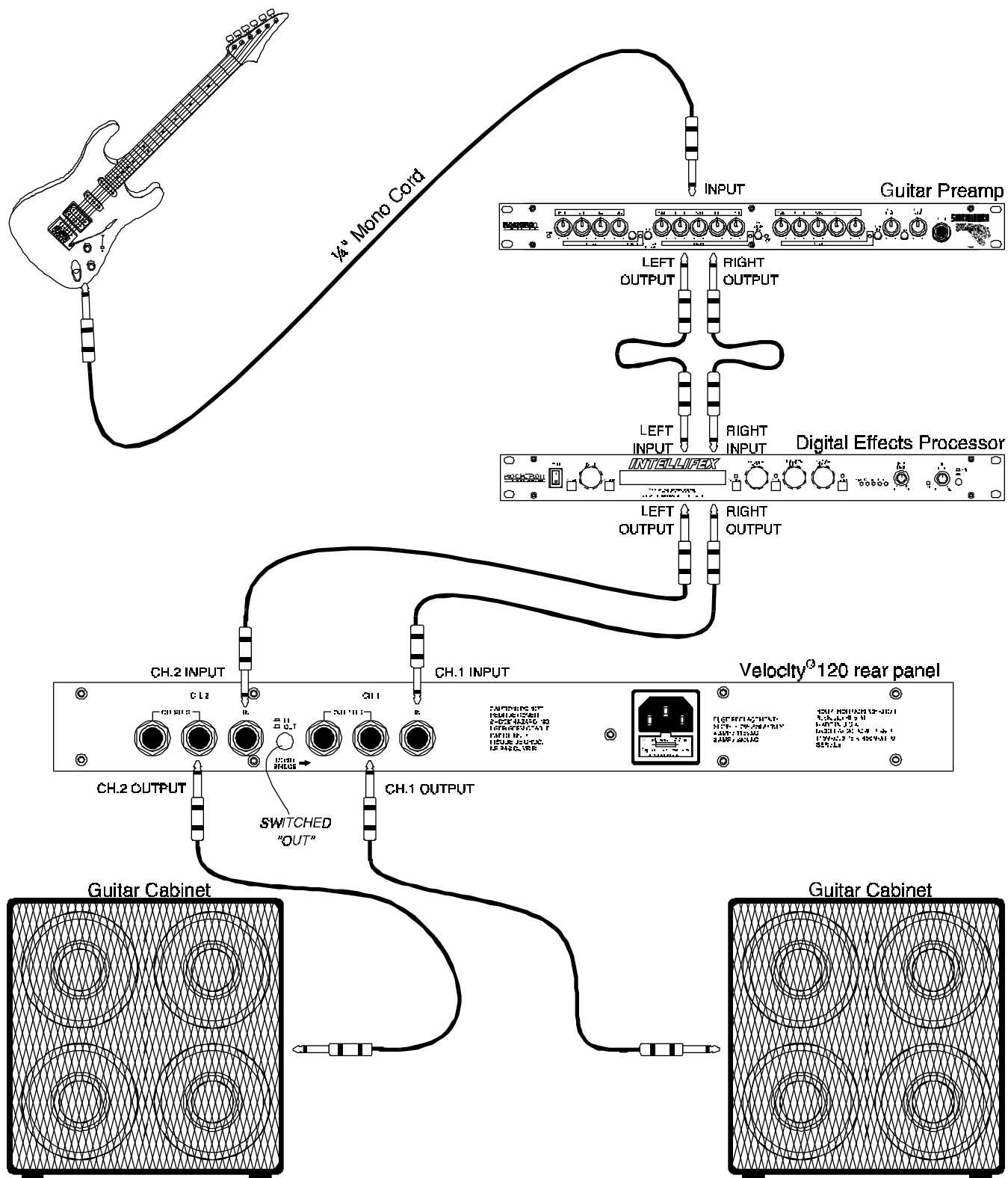
This jack is used as the input jack when operating the Velocity® 120 in "bridged" mode.

6 POWER INLET module

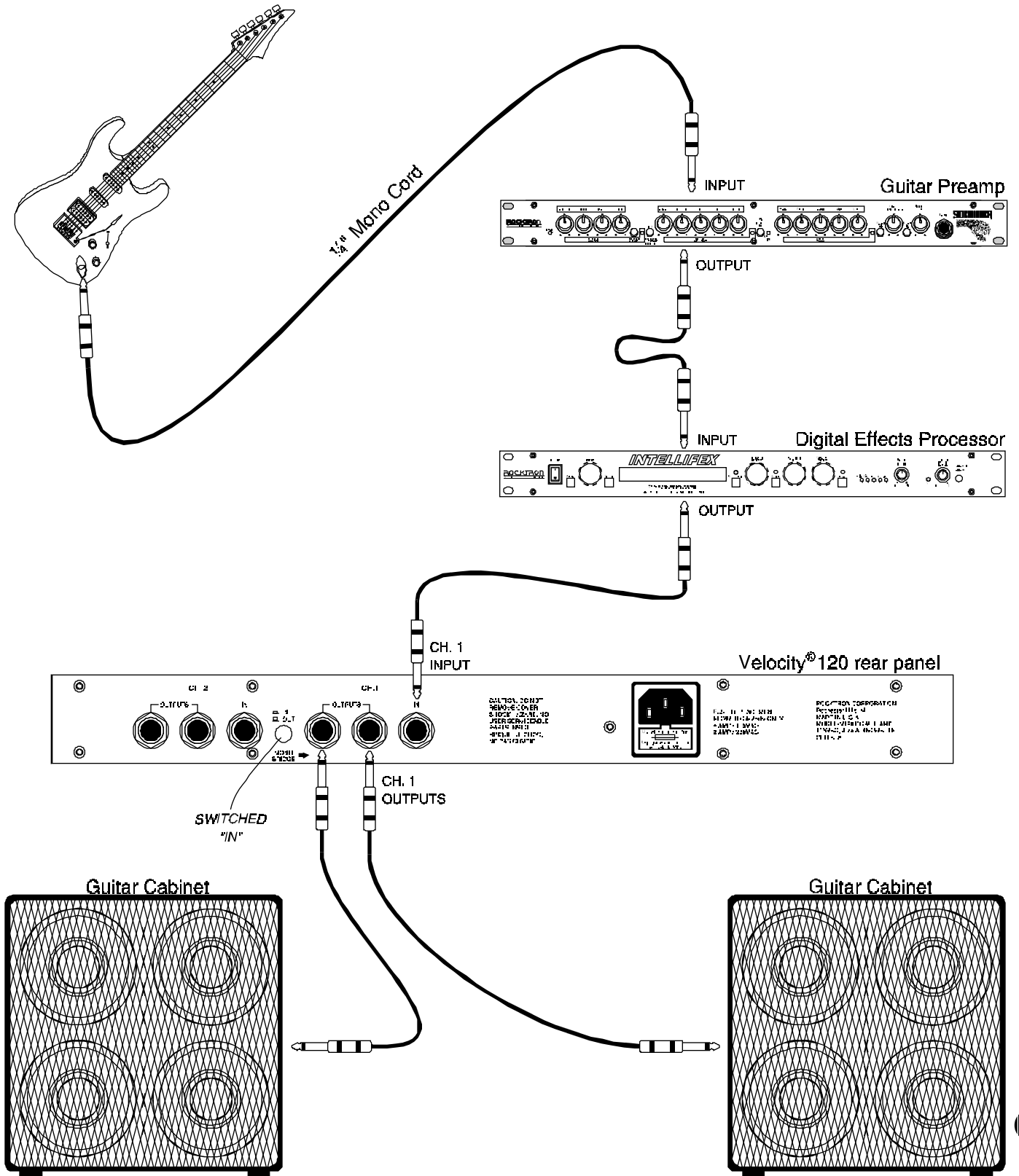
This module provides a connection for the power cord and also houses the main fuse of the unit. (For information about changing the fuse, see page 7).

Connections

Stereo Applications



Mono Bridged Applications



Operating Precautions

Although operation of the Velocity® 120 is simple once the proper connections have been made, attention to the following precautions is essential to protect your equipment against failure and ensure the long life of your Velocity® amplifier.

Power Output/Speaker Load

The Velocity® 120 is capable of producing the following power output levels into each of these loads:

Unbridged (Stereo)

(with both channels driven)

4Ω load	60 watts
8Ω load	50 watts
16Ω load	30 watts

Bridged (Mono)

4Ω load*	(Not Recommended)
8Ω load	120 watts
16Ω load	95 watts

Due to the efficiency of the Velocity® 120 design, there is not a large variance in output level when comparing various impedance loads.

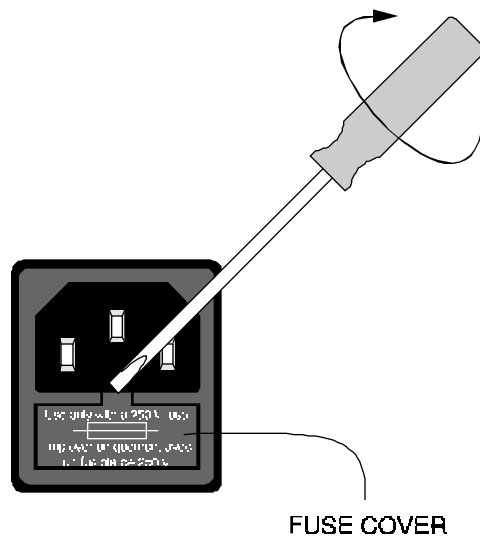
*** Note:** Rocktron does not recommend using the Velocity 120 in bridged mode when connected to a load of less than 8 ohms. However, using the Velocity 120 in bridged mode with an 8 ohm load produces the same output level (120 watts) as would be achieved with a 4 ohm load - therefore using a 4 ohm load would provide no additional benefits.

! Always be certain to use speakers or speaker cabinets capable of
• withstanding the power provided in the above mentioned applications. Rocktron is not responsible for speaker failure resulting from use of this equipment.

! **Never** connect 2 outputs of the amplifier to the same speaker. This
• would be equivalent to shorting the outputs of the amplifier together and would shut the unit down immediately.

Fuse Replacement

Always replace the main fuse with an identically rated replacement. Your Velocity® 120 amplifier uses a 5x20mm, 4 amp, 250V slow-blow fuse. The fuse is located immediately below the line cord inlet on the rear panel and can be accessed by removing the fuse cover module as shown below.

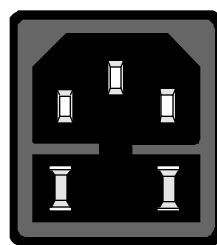


FUSE COVER

Use a small flat screwdriver as shown to slide the fuse cover out from the power inlet module. The fuse can be found inside the fuse cover module after it is pulled out.

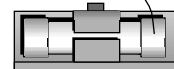


Note: A small compartment is also provided within the fuse cover module for storing a spare fuse.



FUSE CLIPS

MAIN FUSE



FUSE COVER
MODULE
(REAR VIEW)

After replacing the fuse with another of identical specifications, push the fuse cover module fully back into place, ensuring that the fuse has snapped onto the fuse holder inside the power inlet module.

Unique Features

Automatic Short Detection

A feature truly unique to the Velocity® 120 is its Automatic Short Detection circuit. Typically, shorting the outputs of a high output power amplifier will cause amplifier failure and severely damage internal components. The A.S.D. circuit in the Velocity® 120 will automatically detect any shorts which may inadvertently occur across the amplifier's outputs and immediately shut down the unit to protect it against internal damage.

Should this condition occur, switch the unit off for approximately 10 seconds and make sure that the cords from the amplifier outputs are properly connected. When the power is turned on again with the proper connections, the amplifier will operate normally. It is important to note that two outputs from the amplifier should never be connected to the same speaker, as this would be equivalent to shorting the outputs together and will cause the unit to shut down.

In the unlikely event that the proper connections have been made and the unit still shuts down, we strongly recommend that you first contact our Customer Support Department at the phone or fax number shown on the back cover of this manual before taking the unit to a dealer or repair shop for servicing.

Definition Control

It often becomes a problem when playing with other musicians that the guitar can get "buried" under the other instruments and cannot be distinguished easily. The front panel Definition control gives the effect of bringing the guitar out of the cabinet so that it can be heard despite the other instruments. Although it does not actually affect the volume of the amplifier, the Definition control can be adjusted so that the guitar becomes more audible when playing with a band.

Turning the Definition Control fully counter-clockwise bypasses the definition circuit, while turning it fully clockwise provides maximum definition.

Specifications

Output Power (Unbridged)	60 watts per channel @ 4Ω (both channels driven) 50 watts per channel @ 8Ω (both channels driven) 30 watts per channel @ 16Ω (both channels driven)
(Bridged)	120 watts @ 8Ω 95 watts @ 16Ω
Maximum Input Level	+22dBu
Maximum Output Level	+30dBu
Maximum Gain	37dB
Noise Floor	-81dB (referenced to 1 watt)
Dynamic Range	over 100dB
Distortion (Typical)	.015% THD
Frequency Response	±1dB, 20Hz - 20KHz (Definition control OFF)
Current Consumption	450 watts, 3.75 amps @120VAC



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