

mAXE™

Guitar Rack Processor

featuring Distortion, Psychoacoustic Processor and Preamp
with patented AGX™

OWNER'S MANUAL

May be covered by one or more of the following:
U.S. Patents #4881047, 4893099, 4745309,
4538297, 4696044, 4647876.
Other patents pending.
Foreign patents pending.

ROCKTRON
GUITAR RACK TECHNOLOGY

INTRODUCTION

The Rocktron mAXE™ is a single rackspace user-adjustable distortion unit, psychoacoustic processor and preamp. Tone-shaping controls are provided in both the Distortion and the Clean sections and allow the user to simulate virtually any processed guitar amplifier sound and by incorporating Rocktron's patented AGX system (Automatic Gain Expansion), the mAXE™ provides noise free performance when using high gain distortion.

This operating manual will introduce you to the mAXE™ and its various functions. After reading this manual carefully, keep it for future reference.

PRECAUTIONS

NOTE: IT IS VERY IMPORTANT THAT YOU READ THIS SECTION TO PROVIDE YEARS OF TROUBLE FREE USE. THIS UNIT REQUIRES CAREFUL HANDLING.

All warnings on this equipment and in the operating instructions should be adhered to and all operating instructions should be followed.

Do not use this equipment near water. Care should be taken so that objects do not fall and liquids are not spilled into the unit through any openings.

The power cord should be unplugged from the outlet when left unused for long periods of time.

DO NOT ATTEMPT TO SERVICE THIS EQUIPMENT. THIS EQUIPMENT SHOULD BE SERVICED BY QUALIFIED SERVICE PERSONNEL ONLY. DO NOT REMOVE THE COVER FROM THIS EQUIPMENT AT ANY TIME. DO NOT MAKE ANY INTERNAL ADJUSTMENTS OR ADDITIONS TO THIS EQUIPMENT AT ANY TIME. DO NOT TAMPER WITH INTERNAL ELECTRONIC COMPONENTS AT ANY TIME. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY VOID WARRANTY SERVICE TO THIS EQUIPMENT, AS WELL AS CAUSING SHOCK HAZARD.

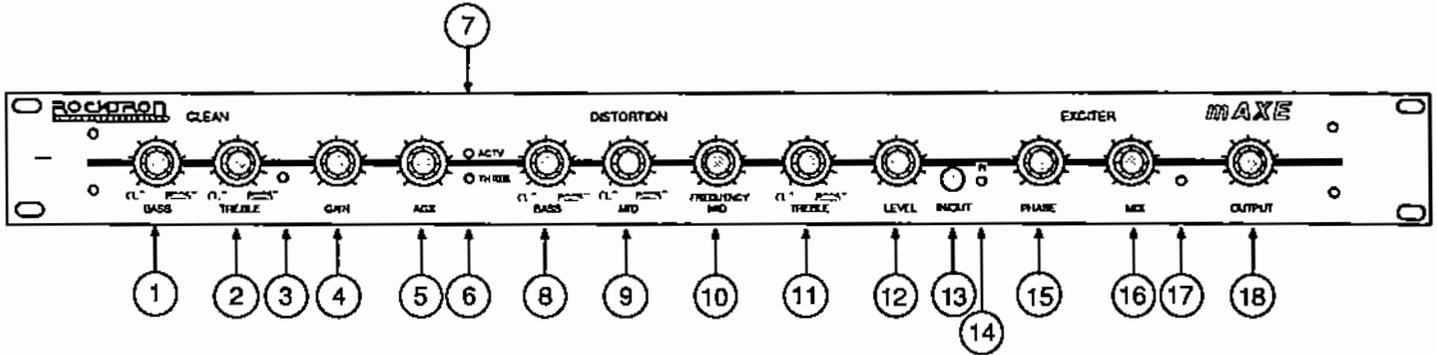
POWER REQUIREMENTS

This unit accepts power from the 9V AC/1500mA adaptor supplied with the unit. This 9V RMS AC voltage is internally processed by a voltage doubler, thus generating a bi-polar + & - 15V to maintain the headroom and sound quality of professional, studio quality equipment. Using an external power source such as this minimizes excessive noise and hum problems often associated with internal transformers, providing optimal performance for the user.

OPERATING TEMPERATURE

Do not expose this unit to excessive heat. 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 temperatures.

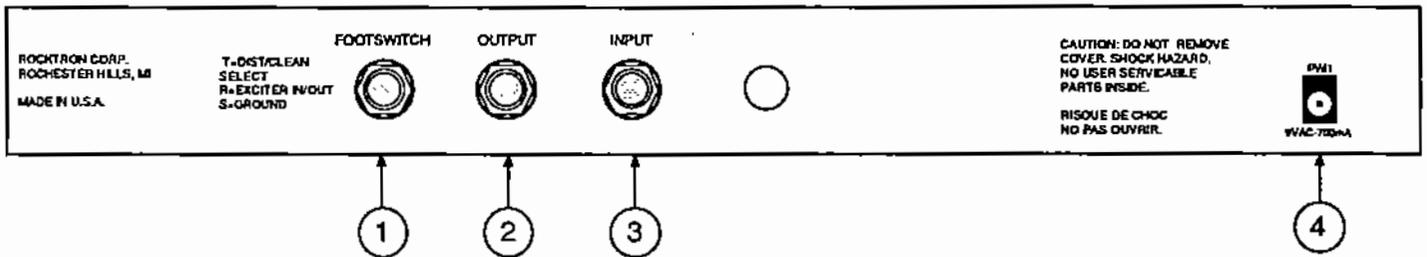
FRONT PANEL DESCRIPTION



- (1) . . **BASS LEVEL control (clean channel):** Variable -10db to +10dB
This Bass control allows a cut or boost of 10dB at low frequencies in the clean channel only.
- (2) . . **TREBLE LEVEL control (clean channel):** Variable -12dB to +12dB
This Treble control allows a cut or boost of 10dB at high frequencies in the clean channel only.
- (3) . . **CLEAN CHANNEL IN/OUT LED:**
When lit, indicates unit is operating in the clean mode.
- (4) . . **GAIN control:** Variable 0 to 10
The Gain control gives the user the ability to adjust the amount of gain of the preamp in the distortion mode.
- (5) . . **AGX THRESHOLD control:** Variable 0 to 10
The AGX control sets a point where the Automatic Gain Expander can work at maximum performance. It is adjustable for input signals covering a wide range.
- (6) . . **THRESHOLD LED:**
This indicates the AGX circuit is below the threshold point and full expansion is taking place.
- (7) . . **ACTIVE LED:**
This LED indicates the AGX circuit is activated and is reducing the gain of the preamplifier stage. When LED is not lit, full gain is resumed.
- (8) . . **BASS LEVEL control (distortion channel):** Variable -20dB to +20dB
This Bass control allows a cut or boost of 20dB in the distortion channel.
- (9) . . **MID LEVEL control:** Variable -15dB to +15dB
The Mid control allows a cut or boost of 10dB of the user adjustable mid frequency.
- (10) . . **MID FREQUENCY control:** Variable 350Hz to 7KHz
The Mid Frequency control selects a frequency between 350Hz and 7KHz to be cut or boosted by the mid level control.
- (11) . . **TREBLE LEVEL control (distortion channel):** Variable -10dB to +10dB
This Treble Level control allows a cut or boost of 10dB in the distortion mode.

- (12). . .**LEVEL control:** Variable 0 to 10
This controls the output level of the distortion relative to the clean signal.
- (13). . .**DISTORTION IN/OUT switch:**
Switches the distortion circuit in or out of the signal path. The function of the In/Out switch is defeated if a footswitch is inserted in the rear footswitch jack.
- (14). . .**DISTORTION IN LED:**
When lit, preamp is in distortion mode.
- (15). . .**EXCITER PHASE control:** Variable
The Phase control adjusts the phase of the excited signal relative to the direct signal. This allows the user to shape the tone of the instrument in the mid and high frequency portion of the spectrum.
- (16). . .**EXCITER MIX control:** Variable 0 to 10
This adjusts the amount of the excited signal mixed in with the direct signal. This control also affects the depth of phase notching produced by the exciter section.
- (17). . .**EXCITER IN LED:**
When lit, indicates exciter section is activated. If no footswitch is used, exciter will be in at all times. To remove the exciter from the signal, the Mix control must be turned fully counterclockwise. If a footswitch is used, the exciter circuit may be switched in or out via the footswitch.
- (18). . .**OUTPUT LEVEL control:** Variable 0 to 10
This control adjusts the final level of the signal at the unit's output.

REAR PANEL DESCRIPTION



(1) . . . **STEREO FOOTSWITCH** jack:

This standard 1/4" stereo jack accepts a dual function optional external footswitch for (1) selection of distortion or clean channel and (2) In/Out switching of the exciter section of the unit.

(2) . . . **OUTPUT** jack:

This standard 1/4" mono jack provides the output of the unit.

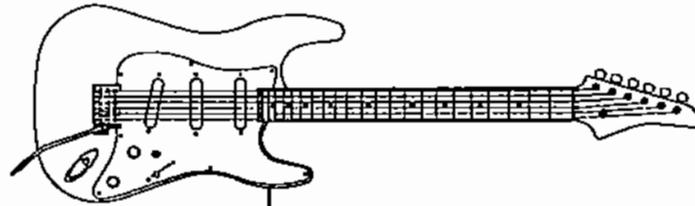
(3) . . . **INPUT** jack:

This standard unbalanced mono 1/4" jack is used to provide input to the unit. The input is high impedance. Read the specifications to determine the maximum input level. Failure to do so will overdrive the unit and may damage the internal circuitry.

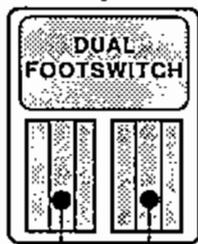
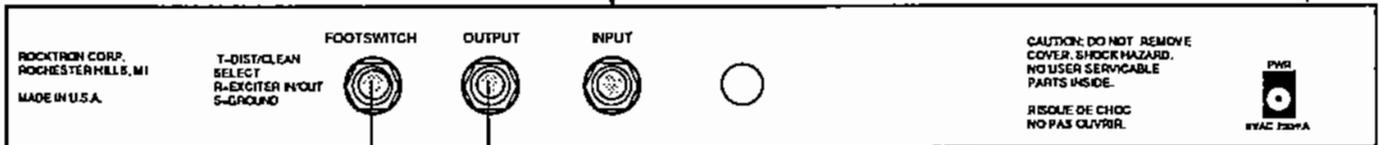
(4) . . . **AC POWER** jack:

This 2.5mm diameter pin jack accepts an external 9VAC adaptor to provide power to the unit. Do not attempt to power two units from one adaptor.

CONNECTIONS

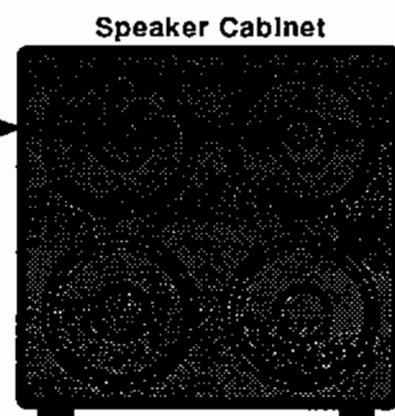
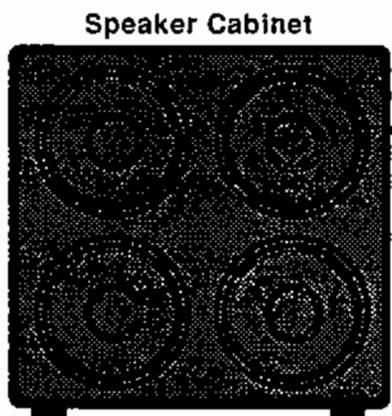
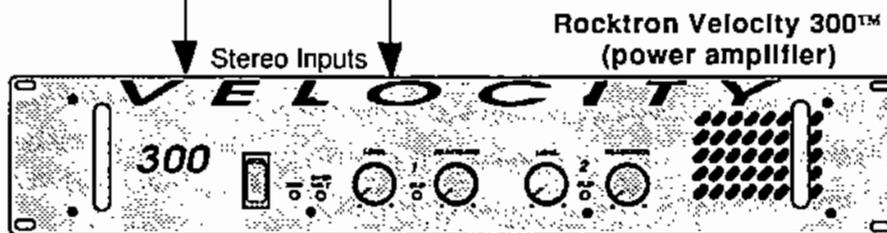
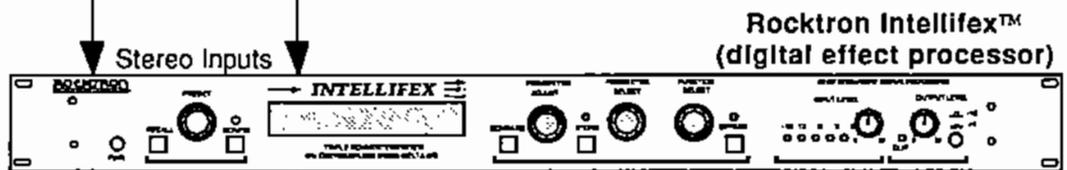
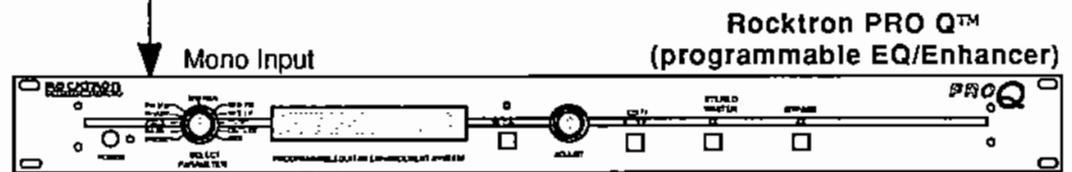


MAXE™ rear panel



Distortion/
Clean Select

Exciter
In/Out
Select



OPERATION

SETUP

Just one of the more attractive features of the mAXE™ is the simplicity of its operation. For initial setup, connect your guitar to the units rear panel input jack. Connect the output of the unit to a guitar amplifier or another effects unit. It should be noted that the mAXE™ was designed for use with guitar cabinets and not for direct use into a mixer. Using guitar cabinets will give optimal tone and sound. Now you are ready to begin shaping your tone.

CLEAN CHANNEL

If the distortion "In/Out" switch is not engaged, the mAXE™ will be in its clean mode of operation and the clean "In" LED will be lit. While in this mode the user will have control over the unit's clean EQ and exciter sections, as well as the overall output level of the clean signal. The following controls will be functional in this mode:

Clean Bass
Clean Treble
Exciter Phase
Exciter Mix
Output

These controls may be used to achieve a wide array of desirable clean sounds.

DISTORTION CHANNEL

Engaging the distortion "In/Out" switch will bypass the clean EQ section of the unit and divert the signal through the distortion circuit of the unit. In this mode the user will have complete control over Gain level, AGX Threshold level, Post Distortion EQ, Distortion level, Exciter section and Output level. All front panel controls are functional except Clean Bass and Clean Treble, allowing the user to create virtually any desired distortion tone.

AGX SECTION

The AGX™ System (Auto Gain Expansion) solves the long standing problem encountered by guitar players when using high gain distortion. No more noise! No more amplification of extraneous signals such as AC line hum, light interference, RF pick-up, and uncontrolled feedback. The guitar player no longer has to sacrifice high gain or volume to achieve a quiet signal. The AGX circuit expands the gain of the amplification circuit only when required based on the input level. When no signal is present, the AGX circuit expands down the amplification level to a point where noise and hum are eliminated. Playing softly allows a clean guitar sound without any noise or distortion that is typically encountered with high gain amplification. Playing with more intensity increases the amplification factor, thus creating more distortion and sustain. The AGX circuit will accurately track the dynamics of the guitar while providing the solution to the noise problem.

HOW TO USE THE AGX:

The AGX circuit is simple to use. Start by turning the AGX threshold control full counterclockwise. Now, create the sound you want and the volume you wish to play at. With the volume control on your guitar up all the way, mute the strings with your hand so that no signal is present. Simply turn the AGX threshold control clockwise just past the point where both the active and threshold LEDs light. All signs of gain and related noise should disappear. The AGX circuit is now set. (Note: some experimenting with the AGX threshold control may be needed to achieve the desired effect.)

SPECIFICATIONS

INPUT

Input Impedance	470K Ohms
Max. Input Level	+16dBu
Input Jack	1/4" mono

FOOTSWITCH JACK	1/4" stereo
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OUTPUT

Output Impedance	Less than 100 Ohms
Max. Output Level	+20dBu
Output Jack	1/4" mono

POWER REQUIREMENTS	9VAC 700mA
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DIMENSIONS	19" x 6" x 1 3/4"
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Note: 0dBu = .775 V RMS

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