

ROCKTRON
TECHNOLOGY FOR GUITARISTS

CYBORG™
DIGITAL DESTINY



Digital Reverb Pedal

Operation Manual

MAY BE COVERED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENTS
#4538297, 4647876, 4696044, 4745309, 4881047, 4893099, 5124657, 5263091,
5268527, 5319713, 5333201, 5402498 AND 5493617.
OTHER PATENTS PENDING. FOREIGN PATENTS PENDING.

HUSH® is a registered trademark of GHS Corporation



Your Cyborg™ Digital Reverb pedal has been designed to comply with the following Standards and Directives as set forth by the European Union:

Council Directive(s): 89/336/EEC Electromagnetic Compatibility

Standard(s): EN55013, EN50082-1

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 and output connections. This will help insure compliance with the Directive(s).

For more information about other Rocktron products, please see your local dealer or one of our importers closest to you (listed on the Rocktron website - www.rocktron.com).

Precautions

Read all instructions contained in this manual.

Keep these instructions

Heed all warnings

Follow all instructions.

Do not use this apparatus near water.

Clean with dry cloth

Precautions Continued...

Do not block any ventilation openings (if applicable). Install in accordance with the manufacturer's instructions.

Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.

This product is supplied with and runs on a 9VDC adapter.

Only use attachments/accessories specified by the manufacturer.

Do not use this product with any case, stand tripod, bracket or table that is not specified by the manufacturer. Insure that the case, stand, tripod, bracket etc. is properly adjusted and setup (follow all instructions). Extra care and caution should be taken to avoid tip over and injury.

Unplug this apparatus during lightning storms or when unused during long periods of time.

Refer all service to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply or plug is damaged, liquid has been spilled or objects have fallen into the apparatus or if the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.

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

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.

Introduction

**Congratulations on your purchase of the Rocktron
Cyborg Digital Reverb.**

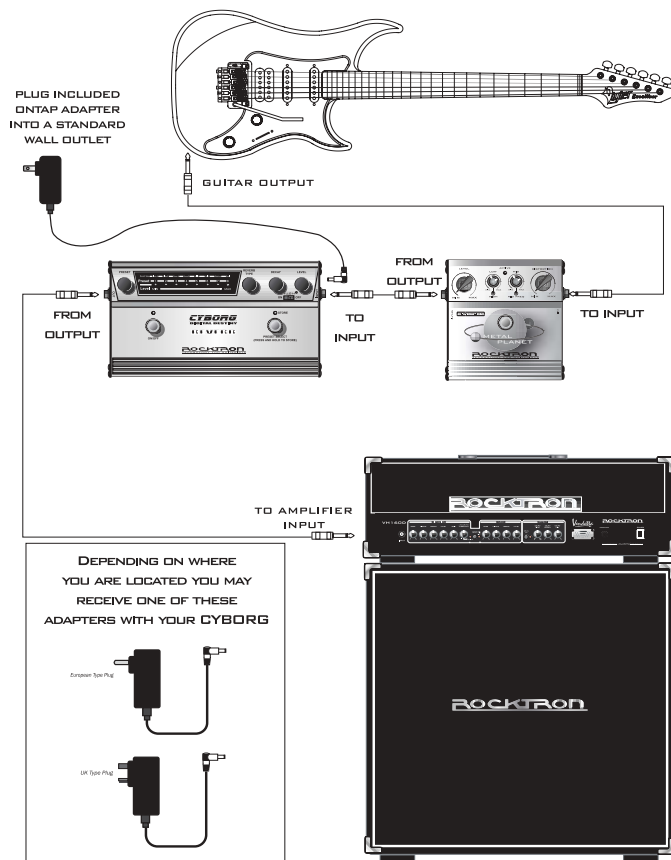
**The Cyborg Digital Reverb is one of a series of “Digital
Destiny” stomp boxes that break new ground in the
world of floor effects excellence. Simple to use, while
offering instant access effects, or satisfying those who
crave more complex control and the ability to create a
plethora of additional presets, the Cyborgs are low
noise, easy operation effects!**

**Rocktron has designed the Cyborg series around a
state-of-the-art Motorola® DSP engine. We’ve included
our HUSH® noise reduction technology, and provided
you with full bandwidth performance. We’ve cut no
corners in the design of these digital stomp boxes.**

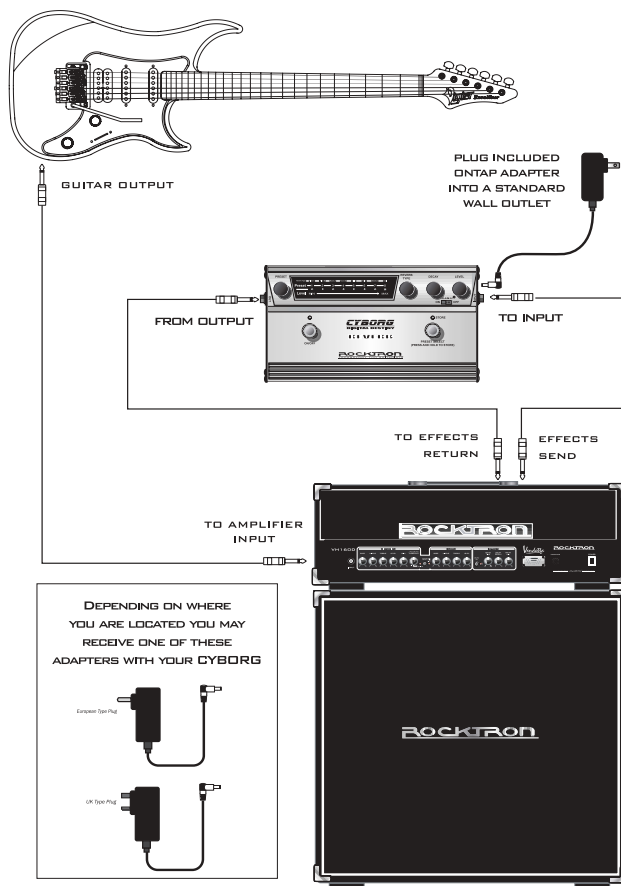
**Cyborgs are fully MIDI programmable and controllable
and Cyborgs can be chained together and controlled by
a single Rocktron MIDI controller.**

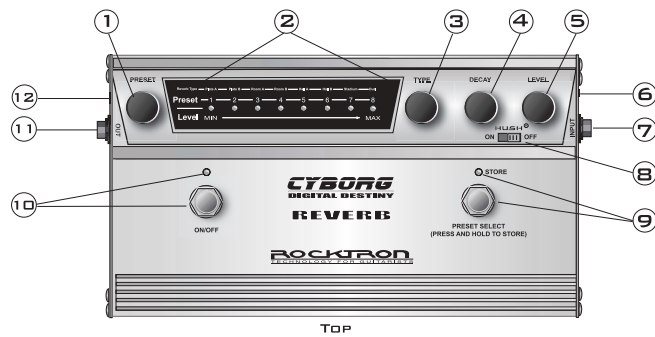
**Look for other Cyborg Digital Destiny pedals at your
Rocktron retailer.**

Connection 1 - Standard Connection

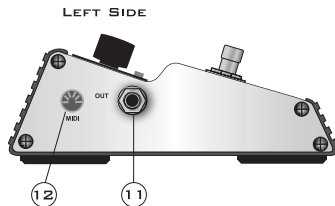


Connection 2 - Effects Loop

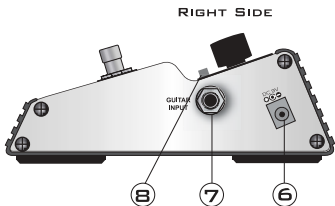




TOP



LEFT SIDE



RIGHT SIDE



BOTTOM

Descriptions

- 1 **Preset Select Knob** - this knob allows you to select the “preset” you desire. Eight presets are available with this control. As the knob is turned the LED under the selected preset will light.
- 2 **LED Display** - see following page for detailed descriptions of display.
- 3 **Reverb TYPE Knob** - this knob allows you to select one of the 8 available reverbs, Plate A, Plate B, Room A, Room B Hall A, Hall B, Stadium, and Dual. As you turn the knob you will note that the LEDs in the LED display will light as you scroll through the different reverbs available as shown in the Reverb Type line in the LED display (for more information the LED display, see the following page).
- 4 **Decay Knob** - this knob allows you to adjust the decay of the reverb tail. As you turn the knob you will note that the LEDs in the LED display will light in order from left to right as you increase the amount of decay. As you decrease the amount of decay the LEDs will turn off from right to left.
- 5 **Level Knob** - this knob determines the “volume” of the reverb relative to the dry signal. As you increase the reverb volume the LEDs in the LED display will light in order from left to right and stay lit. As you decrease the volume of the delay the LEDs will turn off from right to left.
- 6 **DC OnTap Power input.** Use the supplied Rocktron DC OnTap 9V adapter to power your Cyborg pedal. Plug into a standard wall outlet and follow all safety precautions.
- 7 **Input Jack** - plug your guitar into this jack. See preceding pages for standard connections.
- 8 **HUSH Switch** - The Cyborg Digital Reverb pedal includes Rocktron Patented Digital HUSH noise reduction. Select “ON” if the reverb pedal is placed after a noisy distortion pedal. Select “OFF” when using clean tones. For more on the HUSH and how it works, see the HUSH Section of this manual.

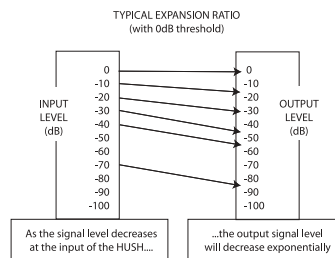
Descriptions *Continued*

- 9 **Preset Select/Store Switch and Store LED** - this switch allows you scroll through the presets by using the footswitch. Press and depress the Preset Select Footswitch to change the preset. Note that the presets will change in order from 1 to 8. After preset 8, the preset will go back to preset 1.
- 10 **STORE function** - Use this function to STORE (or save) changes you have made to a preset. To operate the STORE function, press and hold the PRESET SELECT switch down for 2 seconds. This will save the changes to your preset. The STORE LED will "hold on" and then return to flashing to confirm the storing process has been completed.
- 11 **On/Off Footswitch and LED** - this footswitch is used to turn "ON" or "OFF" the Cyborg Reverb. When the LED is lit, the reverb is "ON"
- 12 **Output Jack** - Using a standard guitar cable with a 1/4" jack, plug into your amplifier or the next effect pedal in your signal chain.
- 13 **MIDI Jack** - Using the Rocktron MIDI Breakout Cable (sold separately) you can connect the Cyborg Pedal to a Rocktron MIDI Footcontroller such as the Rocktron MIDI XChange, MIDI Mate or All Access. This feature allows you to access all 64 presets and even connect other Cyborg pedals to be controlled by the MIDI footcontroller.

HUSH®

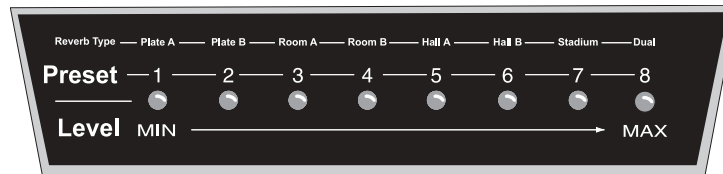
HUSH® is Rocktron's patented single-ended noise reduction system, and is available in all presets. The HUSH system provided in the Cyborg is a fully digital implementation, modeled after the latest analog HUSH design, achieved through Digital Signal Processing (DSP).

The low level expander of the HUSH system operates like an electronic volume control. The analog version of the HUSH system utilizes a voltage-controlled amplifier (VCA) circuit which can control the gain between the input and the output from unity gain to 30, 40 or even 50dB of gain reduction. When the input signal is above the user-set threshold point, the VCA circuit remains at unity gain. (This means that the amplitude of the output signal will be equal to that of the input signal.) As the input signal level drops below the user preset threshold point, downward expansion will begin. It is at this point that the expander acts like an electronic volume control, gradually decreasing the output signal level relative to the input signal level. As the input signal drops further below the threshold point, downward expansion increases (see figure below).



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.

LED Display



The Cyborg's LED Display consists of 8 LEDs that are used to visually show the user:

- 1) The PRESET selected
- 2) The REVERB TYPEs available to any preset.
- 3) The LEVEL setting (MIN through MAX) of each of the preset's parameters for the Decay knob (point 4) and the Level Control knob (point 5).

As an example, let's choose preset 1.

1) PRESET - First, turn the Preset Knob (point 1) until the LED under the number 1 lights. You now have selected Preset 1.

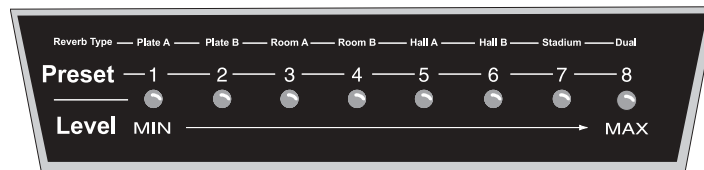
2) REVERB TYPE - Now, select the type of reverb you would like to use for Preset 1 by using the TYPE knob.

3) The LEVEL setting parameter shows the LEVEL settings of the following parameters:

o The Decay Control Knob (Point 4). Turning the Decay Control knob will light LEDs in the display to show you the Decay length that you have selected within the preset. To see the current decay length of the preset, turn the knob only one click. This will cause the LEDs to light showing your current setting. To change the setting continue turning the knob. Turning the knob clockwise will increase the decay time and the LEDs will light from left (MIN) to right (MAX). To shorten the decay time turn the knob counter-clockwise and the LEDs will turn off from right (MAX) to left (MIN).

o The Level Control Knob (point 5). Turning the Level Control knob will light LEDs in the display to show you level of the reverb of the preset relative to the unaffected dry signal. To see the current level for this preset, turn the knob only one click. This will cause the LEDs to light showing your current setting. To change the setting continue turning the knob. Turning the knob clockwise will increase amount of wet (effected) signal relative to the dry (unaffected) signal and the LEDs will light from left (MIN) to right (MAX). Turning the knob counterclockwise will decrease the amount of wet signal relative to the dry signal and the LEDs will turn off from right (MAX) to left (MIN).

LED Display...continued... _____



Reverb Type

The top line in the LED display is the REVERB TYPES that are available for each preset.

Preset 1 reverb is called PLATE A. This reverb is a Plate reverb

Preset 2 reverb is called PLATE B. This reverb is a Plate reverb.

Preset 3 reverb is called ROOM A. This reverb is a room reverb that simulates the reverb sound of a small room.

Preset 4 reverb is called ROOM B. This reverb is a Room reverb that simulates a slightly larger room than Room A.

Preset 5 reverb is called HALL A. This reverb is a Hall reverb that simulates the reverb sound of medium sized Hall.

Preset 6 reverb is called HALL B. This reverb is a HALL reverb that simulates the reverb sounds of a large sized Hall.

Preset 7 reverb is called STADIUM. This reverb is a Stadium reverb the simulates the reverb sound generated by a large Stadium.

Preset 8 reverb is called DUAL. The Dual reverb simulates the characteristics of an irregularly shaped room, combining early delayed reflections with longer reflections that would be present in such an oddly shaped environment where the walls are close and far away.

MIDI

The Cyborg pedal has a MIDI jack that allows you to access an additional 56 user presets. Using the Rocktron MIDI Breakout cable (sold separately) you can access these additional 56 presets (64 total) by using a Rocktron MIDI Controller such as the Rocktron MIDI XChange, MIDI Mate or All Access. This will also allow you to connect and control additional Rocktron Cyborg pedals.

Note that all 64 presets on the Cyborg Reverb may be modified and stored. When using the option MIDI Breakout cable to access the remaining 58 presets you will find that these locations have the original factory presets already stored. Example: Preset 1-8 are repeated in MIDI recall locations, 9-16, 17-24, 25-32, 33-40, 41-48, 49-56 and 57-64. Also note that the preset locations 1-64 will be recalled when receiving program changes 65-128 thus allowing all MIDI program changes 1-128 to be accepted

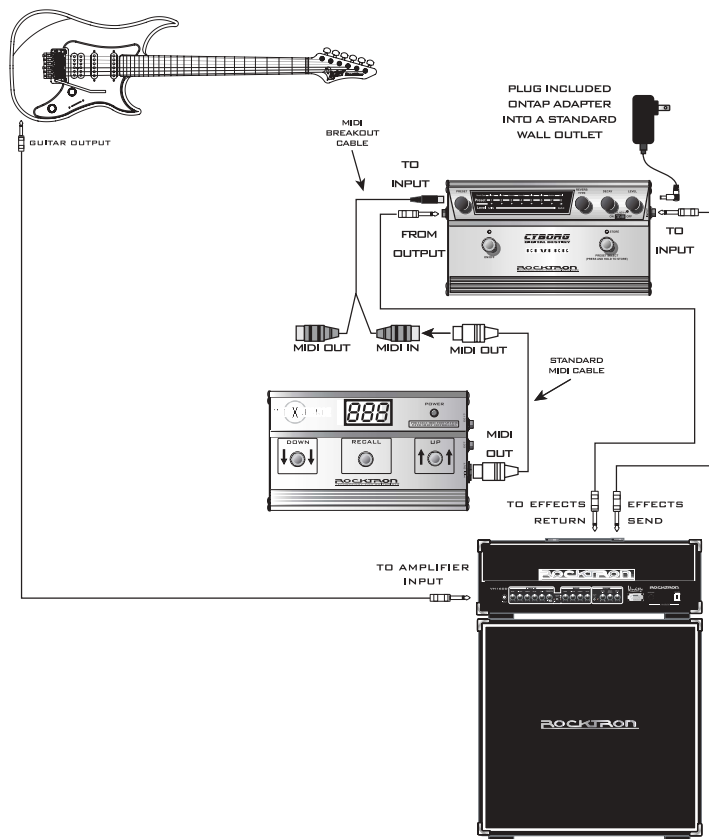
See MIDI connections using the optional MIDI Breakout cable on the following pages.

Cyborg MIDI Preset Programming

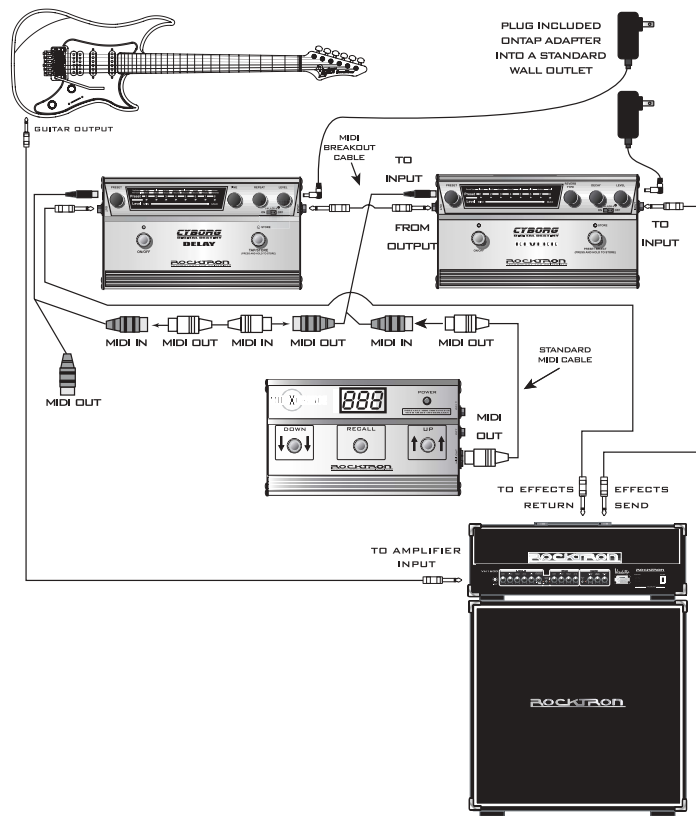
Connect Midi X-change to CYBORG using the optional Midi Breakout cable as shown in MIDI Connection 1 and 2

- 1) To program any preset simply recall the preset to be programmed with your MIDI CONTROLLER.
- 2) Now adjust preset with control knobs to make your desired changes.
- 3) Once you have created your preset press and hold down the TAP/STORE Button on the Cyborg pedal until the led indicates the store process is completed. (LED will hold bright then return to Tap Delay blinking status).

MIDI - Connection 1



MIDI - Connection 2



Specifications

Maximum Input	+3dBu
Input Impedance	1M
Current Consumption	1000ma
Freq. Response	20Hz-16Khz +-3dBu
Dynamic Range	93dBu
Power Requirements	Rocktron DC OnTap 9V Adapter
Dimensions	10.5" x 6" x 2.25"

Notes:

ROCKTRON
TECHNOLOGY FOR GUITARISTS

CYBORG
DIGITAL DESTINY
REVERB

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