



**AMP
MODELING**



**PICKUP
MODELING**



**ACOUSTIC
MODELING**



**CABINET
MODELING**



EFFECTS



TALKER™



**RHYTHM
TRAINER**



LEARN-A-LICK™



**DIGITAL
OUTPUT**

DigTech

RP2000

MODELING
GUITAR
EFFECT
SYSTEM



USER'S
GUIDE



These symbols are internationally accepted symbols that warn of potential hazards with electrical products. The lightning flash means that there are dangerous voltages present within the unit. The exclamation point indicates that it is necessary for the user to refer to the owners manual.

These symbols warn that there are no user serviceable parts inside the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service. Disconnect the unit during storms to prevent damage.

U.K. Mains Plug Warning

A molded mains plug that has been cut off from the cord is unsafe. Discard the mains plug at a suitable facility. **Never under any circumstances should you insert a damaged or cut mains plug into a 13 amp power socket.** Do not use the mains plug without the fuse cover in place. Replacement fuse covers can be obtained from your local retailer. Replacement fuses are 13 amps and **MUST** be ASTA approved to BSI362.

Safety Instructions

Notice for customers if your unit is equipped with a power cord.

Warning: This appliance must be earthed.

The cores in the mains lead are colored in accordance with the following code:

Green and Yellow - Earth Blue - Neutral Brown - Live

As colors of the cores in the mains lead of this appliance may not correspond with the colored markings identifying the terminals in your plug, proceed as follows:

- The core which is colored green and yellow must be connected to the terminal in the plug marked with the letter E, or with the earth symbol, or colored green, or green and yellow.
- The core which is colored blue must be connected to the terminal marked N, or colored black.
- The core which is colored brown must be connected to the terminal marked L, or colored red.

This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. If the attachment plug needs to be changed, refer servicing to qualified service personnel who should refer to the table below. The green/yellow wire shall be connected directly to the unit's chassis.

CONDUCTOR		WIRE COLOR	
		Normal	Alt
L	LIVE	BROWN	BLACK
N	NEUTRAL	BLUE	WHITE
E	EARTH GND	GREEN/YEL	GREEN

Warning: If the ground plug is defeated, certain fault conditions in the unit or in the system to which it is connected can result in full line voltage between chassis and earth ground. Severe injury or death can then result if the chassis and earth ground are touched simultaneously.

Warning

For your protection, please read the following:

Water and Moisture: Appliances should not be used near water (e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.) Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

Power Sources: The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

Grounding or Polarization: Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

Power Cord Protection: Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

Servicing: To reduce the risk of fire or electrical shock, the user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

For units equipped with externally accessible fuse receptacle: Replace fuse with same type and rating only.

Electromagnetic Compatibility

Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.
- Use only shielded interconnecting cables.
- Operation of this unit within significant electromagnetic fields should be avoided.

DECLARATION OF CONFORMITY

Manufacturer's Name: **Digitech Electronics**
Manufacturer's Address: 8760 S. Sandy Parkway
Sandy, Utah 84070, USA

declares that the product:
Product Name: **RP2000**
Product Options: All (requires a Class II power adapter that conforms to the requirements of EN60065, EN60742, or equivalent.)

conforms to the following Product Specifications:

Safety: EN 60065 (1993)
IEC 65 (1985) with Amendments 1, 2 & 3

EMC: EN 55013 (1990)
EN 55020 (1991)

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and EMC Directive 89/336/EEC as amended by Directive 93/68/EEC.

Digitech
Vice-President of Engineering
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Tel: 801-566-8800
Fax: 801-566-7005

Effective October 8, 1999

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Harman Music Group
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Sandy, Utah 84070, USA
Tel. 801-568-7638
Fax 801-568-7642

Warranty

We at **Digitech** are very proud of our products and back-up each one we sell with the following *warranty*:

- 1. The warranty registration card must be mailed within ten days after purchase date to validate this warranty.*
- 2. Digitech warrants this product, when used solely within the U.S., to be free from defects in materials and workmanship under normal use and service.*
- 3. Digitech liability under this warranty is limited to repairing or replacing defective materials that show evidence of defect, provided the product is returned to Digitech WITH RETURN AUTHORIZATION, where all parts and labor will be covered up to a period of one year. A Return Authorization number may be obtained from Digitech by telephone. The company shall not be liable for any consequential damage as a result of the product's use in any circuit or assembly.*
- 4. Proof-of-purchase is considered to be the burden of the consumer.*
- 5. Digitech reserves the right to make changes in design, or make additions to, or improvements upon this product without incurring any obligation to install the same on products previously manufactured.*
- 6. The consumer forfeits the benefits of this warranty if the product's main assembly is opened and tampered with by anyone other than a certified Digitech technician or, if the product is used with AC voltages outside of the range suggested by the manufacturer.*
- 7. The foregoing is in lieu of all other warranties, expressed or implied, and Digitech neither assumes nor authorizes any person to assume any obligation or liability in connection with the sale of this product. In no event shall Digitech or its dealers be liable for special or consequential damages or from any delay in the performance of this warranty due to causes beyond their control.*

NOTE: The information contained in this manual is subject to change at any time without notification. Some information contained in this manual may also be inaccurate due to undocumented changes in the product or operating system since this version of the manual was completed. The information contained in this version of the owner's manual supersedes all previous versions.

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Section-I Introduction

Getting Acquainted

Congratulations on your wise choice in purchasing the RP2000. Thanks to the continuous advances in musical technology, you have the flexibility, power, and capability of producing sonic creations never before thought possible. Although the RP2000 is so user friendly you may not even need to read this manual, we recommend that you become better acquainted with us, and what we have to offer by going through this User's Guide with your RP2000 in front of you. It is your key to unlocking the potential within the RP2000.

Included Items

Before you get started, please make sure that the following items have been included:

- **RP2000**
- **PS0920 Power Supply**
- **User's Guide**
- **Warranty Card**

The utmost care was taken while your RP2000 was being manufactured, so everything should be included and in perfect working order. If anything is missing, contact the factory at once. Please help us become acquainted with you and your needs by completing your warranty card. It is your safeguard should a problem arise with your RP2000.

Quick Start

This brief overview of the RP2000 and its functions is included for those of you looking for immediate gratification.

Making Connections:

Connect your instrument to the input jack on the rear panel. Connect the Left or Right Outputs to the input(s) of your amplifier(s) or power amp. To select the output mode, press the Utility button once and rotate the Data Wheel to select either Stereo or Mono output mode.

Apply Power:

Turn the Output knob on the rear panel of the RP2000 all the way down (fully counter clockwise). Connect the plug of the PS0920 power supply to the power jack on the RP2000. Connect the other end of the PS0920 power supply to an AC outlet. Turn the power of your amplifier(s) to the on position and adjust the volume(s) to a normal playing level. Gradually increase the RP2000 Output knob to achieve the desired volume.

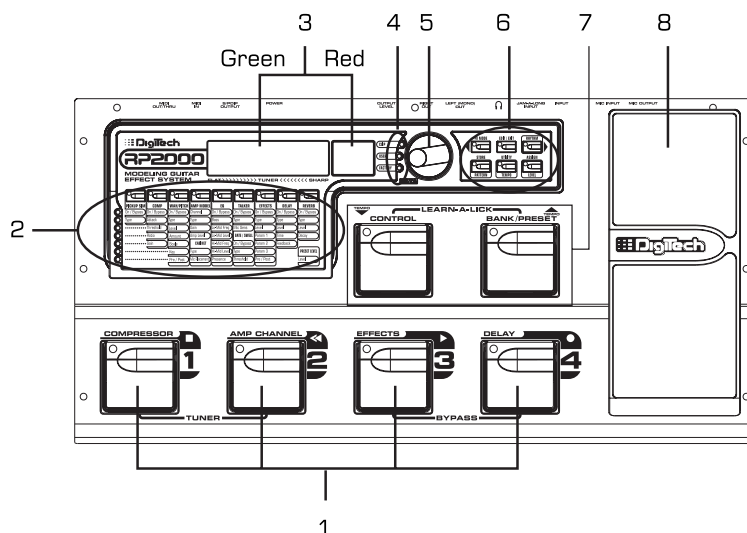
Select Preset:

The RP2000 comes with 64 pre-Programmed factory Presets, and 64 user Presets. From the factory, the user Presets are exact duplicates of the factory Presets. This allows you to experiment without running the risk of losing any of the original sounds contained in the RP2000.

Use the 1-4 Footswitches or the Data Wheel to select different Presets. Once you have found Presets that suit your taste, you can alter the sounds to your specific needs. By pressing the Edit button and then using the Matrix buttons, you can access any of the effects contained within the selected Preset. Successive presses of the Matrix buttons will advance through each of the parameters related to each effect. Use the LED Matrix to choose the parameter you wish to edit. Follow the rows and columns to the point where the vertical and horizontal LEDs intersect. This will indicate the parameter you have selected. Once a parameter has been selected, you may increase or decrease the parameter value to your liking by rotating the Data Wheel. Remember that you are not at risk of losing any sounds so, don't be afraid to experiment.

A Guided Tour of the RP2000

The Front Panel



1. Preset Switches - These 4 footswitches are used to select Presets, access the Tuner, turn individual effects on and off, change Amp Channels, select functions in Learn-A-Lick mode, or bypass the RP2000.

2 Matrix - The matrix provides information regarding the current Preset, and parameter edit functions. While in performance mode, the LEDs in the 9 buttons across the top of the Matrix will provide a visual indication of which effects are in use for the current Preset. Pressing these buttons will turn these effects on and off. While in Edit mode, the 9 buttons across the top of the matrix provide access to the effects and parameters in the RP2000. Successive presses of the same button will advance through all parameters associated with the selected Effect. The LEDs within each button indicate which effect has been selected, and the vertical row of LEDs will indicate the selected parameter. Following the horizontal and vertical LEDs across the matrix to the point where they intersect will indicate which effect and parameter are selected.

3. Display - The Display consists of six alphanumeric green characters, and two red digits, and provides information for several different functions depending on the mode that has been selected. In Performance mode, the green portion of the Display will show the currently selected Preset name and the red portion will show the Preset number. The Display will also show Bank names when changing banks, and momentarily flash the active Amp Channel when the Amp Channel is switched. In Edit mode, the green portion of the Display will show the status or parameter of the currently selected effect, while the red portion will show the value of the parameter. In Tuner mode, the red portion of the Display will show the note played, and the green portion will provide sharp or flat indications. In Learn-A-Lick mode, the green display shows the currently selected function and the red Display provides an elapsed time for record and playback.

4. LED Indicators - These three LEDs offer a visual indication of clipping, and whether a User or Factory Preset is active. The top LED is a clip indicator which will light when internal DSP clipping occurs. The Factory and User LEDs will light independently indicating whether a Factory or User Preset is in use.

5. Data Wheel - The Data Wheel functions will change depending upon which mode has been selected. It is used to change Presets, increase or decrease Parameter values, edit Assign and Rhythm functions, and modify utility settings.

Section One - Introduction

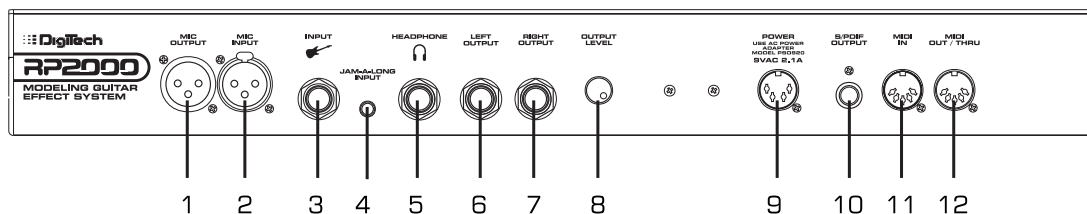
6. Mode Buttons- These 6 buttons are used to select various modes in which the RP2000 will function. The top three buttons perform single functions while the bottom three buttons perform dual functions based upon the current operation of the RP2000. The buttons are labeled as follows:

- A) FX Mode** - The FX Mode button selects whether the 1-4 footswitches will recall Presets within the selected Bank, or act as on/off switches for the individual effects in the currently active Preset. The FX Mode button will light when the switches are performing effects on/off functions.
- B) Edit/Exit** - This button will take the RP2000 in and out of the edit mode. The LED will light while you are in Edit mode. This button can also be used to escape from any mode or level of editing.
- C) Rhythm** - The Rhythm button is used to access the drum loop feature in the RP2000. When the Rhythm feature is selected, the LED will light and the bottom row of Mode buttons are used to edit various functions in Rhythm mode.
- D) Store** - The Store button is used to save your custom edits to the user Presets. The function of this button changes to select Pattern in Rhythm mode.
- E) Utility** - The Utility button provides access to several global functions including MIDI Channel, and Sysex dumps. The function of this button changes to select Tempo in Rhythm mode.
- F) Assign** - This button is used to assign a parameter to the Control footswitch, the Expression Pedal, or internal LFOs. The function of this button changes to select Level in Rhythm mode.

7. Bank/Control Switches - The Bank switch is used to change the RP2000's Banks. If FX Mode is selected, it changes Presets. The Control switch can have a variety of functions assigned to it. Press these 2 footswitches simultaneously to access the Learn-A-Lick function, or individually to adjust the Learn-A-Lick playback tempo.

8. Expression Pedal - The Expression Pedal is used for real time control of parameters during performance. For Example, this pedal may control Volume in one Preset, Wah in another Preset, or control the Delay Level in yet another Preset. Individual boundaries may be set up for the minimum and maximum parameter values that are controlled by the Expression Pedal. The RP2000's exclusive V-Switch feature allows you to change functions of the Expression Pedal by applying extra pressure on the toe of the Pedal. See page 29 for more on making expression pedal assignments.

Rear Panel



- 1. Mic Output** - This XLR jack is used as a Mic throughput passing your Mic signal on to the house mixing console.
- 2. Mic Input** - This XLR jack is used to connect a low impedance Mic to the RP2000 for use with the Talker, and Vocoder effects. A mic with a cardioid pattern is recommended.
- 3. Input Jack** - Connect your instrument to this jack.
- 4. Jam-A-Long Jack** - This is where you connect a tape or CD player in order to jam along with the music, or for the purpose of recording a lick into the Learn-A-Lick phrase recorder. Use an 1/8" stereo plug for this connection. See page 10 for more on using the Jam-A-Long and Learn-A-Lick function.
- 5. Headphone Output** - Connect stereo headphones to this jack. Be sure to enable Cabinet Modeling when listening through Headphones. Do not connect a mono jack here as doing so may damage the output driver.
- 6. Left Output** - Connect from this jack to the input of an amplifier or the left input of a stereo power amp.
- 7. Right Output** - Use this jack in conjunction with the Left Output for stereo applications. Connect from this output to the input of a second amplifier, or the right input of a stereo power amp.
- 8. Output Level** - This knob controls the overall volume level of the signal coming out of the RP2000.
- 9. Power Input** - This jack is used to power the RP2000. Use only the DigiTech PS0920 power supply provided.
- 10. S/PDIF Output** - This is the digital output from the RP2000. The signal at this output is in a stereo digital format, and is to be connected to a digital S/PDIF input such as those found on digital recording devices.
ATTENTION: Do not connect the S/PDIF output to analog auxiliary, CD, phono, or tape inputs on consumer electronic devices. It is not compatible with these inputs.
- 11. MIDI In** - This jack is used to receive all incoming MIDI data intended to control the RP2000. Connect from this jack to the MIDI out of a sequencer, MIDI controller, or MIDI storage device.
- 12. MIDI Out/Thru** - This jack is used for all MIDI data being sent out of the RP2000. Connect from this jack to the MIDI input of any external MIDI recording device for MIDI sysex dumps. The MIDI Thru function of this jack simply sends out the same information that is received at the MIDI In of the RP2000.

Getting Started

Making Connections

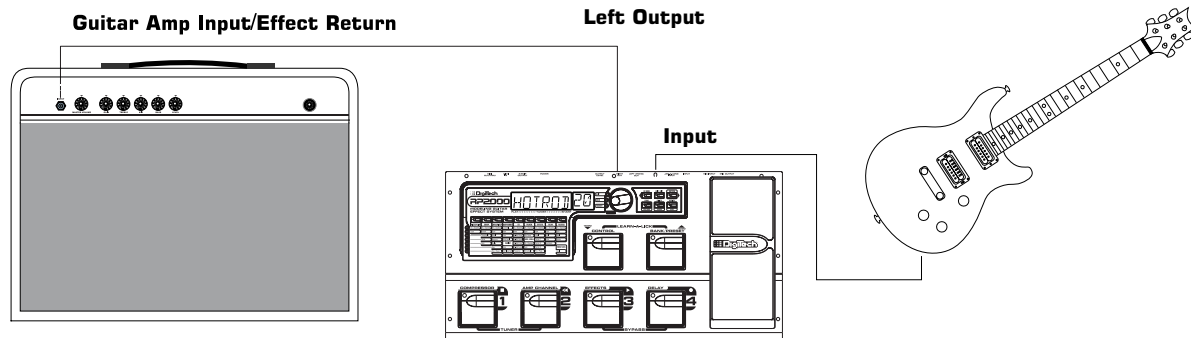
Before connecting the RP2000, make sure that the power to your amplifier is turned off, and that the power to the RP2000 is disconnected. There is no power switch on the RP2000. To turn the RP2000 on or off, simply connect or disconnect the power supply from an AC outlet.

There are several different connection options available when using the RP2000. You may run mono into an amp or power amp, stereo into two amps or a stereo power amp, direct into a mixing console, connect digitally to the input of a digital recorder or mixer, or a combination of these. The following diagrams show the connections for some of these options.

NOTE: The RP2000 is a preamp. Running The RP2000 signal into the input of a combo guitar amplifier will preamplify the signal again possibly adding noise and feedback. When using a guitar amp, it may be best to connect the guitar to the input of the RP2000 and the output of the RP2000 to the effect return of the amplifier.

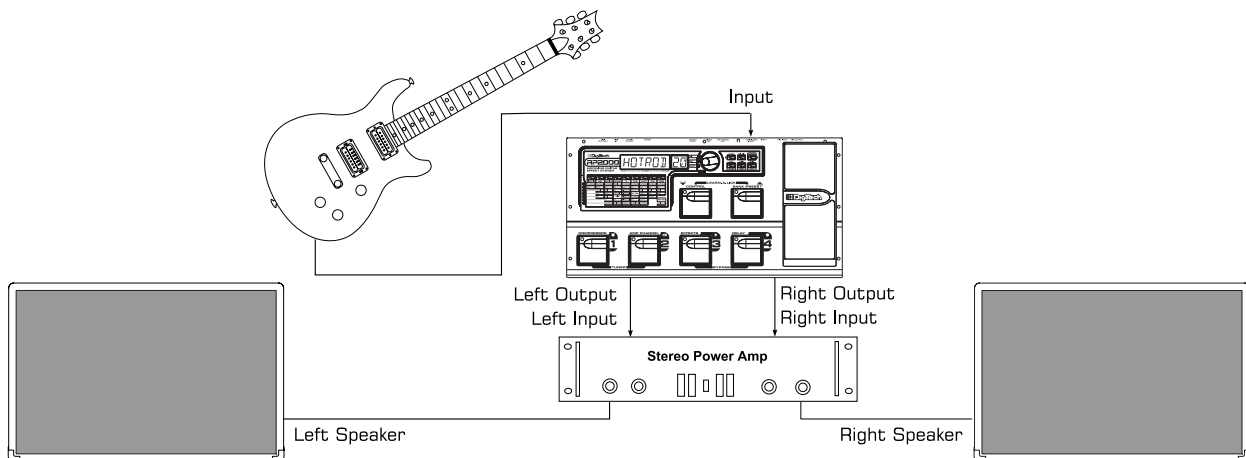
Mono Operation

Connect your guitar to the input of the RP2000. Connect the Left output of the RP2000 to the instrument input on your amplifier, or to the line input of a power amp. Select Mono as the Output mode in the Utility menu. See page 30 for more on selecting the Output mode.



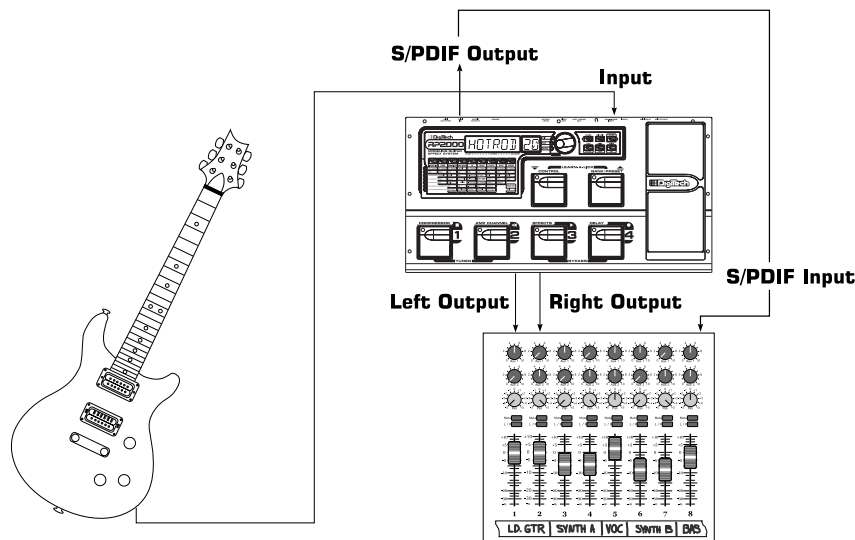
Stereo Operation

For stereo operation connect the guitar to the input of the RP2000. Connect from the RP2000's Left output to the input of one amplifier or channel of a power amp. Connect from the Right output of the RP2000 to a second amplifier, or to a second channel of a power amp. Select Stereo as the Output mode in the Utility menu. See page 30 for more on selecting the Output mode.



Direct to a Mixing Console

The RP2000 can be connected directly to the inputs of a house PA system, or to a recording console. Connect the guitar to the input of the RP2000. Connect from the outputs of the RP2000 to the channel inputs of the mixing console. If the RP2000 is to be used in Stereo mode, set the pan controls of the mixer hard left and right, and select stereo as the output mode in the RP2000's Utility menu. See page 30 for more information on the output mode. Be sure to engage the RP2000's Cabinet Emulator when connecting direct to a mixer. See page 31 for more on selecting the Cabinet Emulator.



S/PDIF Digital Output

The RP2000 includes a digital S/PDIF output enabling you to eliminate multiple A/D and D/A conversions when recording digitally. Simply connect from the S/PDIF output of the RP2000 to the S/PDIF input on your digital mixer or recorder. You must have S/PDIF inputs on the receiving device in order to use this output. You may use the analog and digital outputs of the RP2000 simultaneously. Be sure to use a 75 ohm or RCA video cable to connect from the Digital Output to a recording device.

ATTENTION: Do not connect the S/PDIF output to analog auxiliary, CD, phono, or tape inputs on consumer electronic devices. It is not compatible with these inputs.

Applying Power

Once the audio connections have been made, turn the Output Level all the way down (counterclockwise). Connect the PS0920 to the power jack on the back of the RP2000 and the other end to an AC outlet. Turn the power to your amplifier(s) on. Set the amp(s) to a clean tone and set the tone controls to a flat EQ response (on most amps, this would be 0 or 5 on the tone controls). Turn the Output Level of the RP2000 up to achieve the desired volume level.

About the RP2000

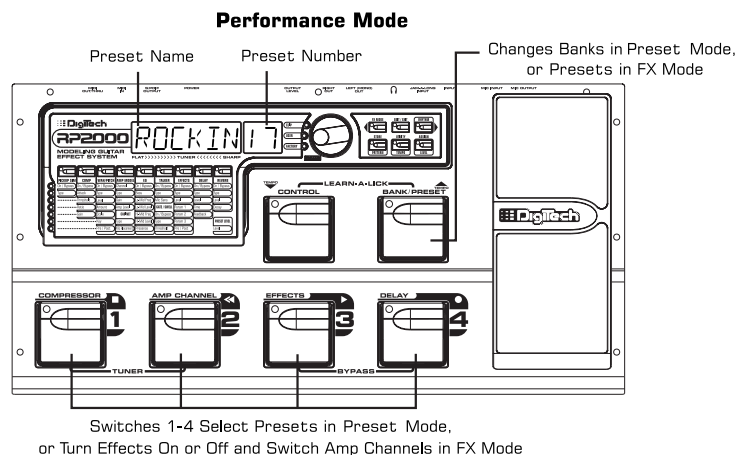
The Presets

Presets are numbered locations of programmed sounds which reside in the RP2000. Presets can be recalled with the Footswitches or the Data Wheel. The RP2000 comes with 64 Factory and 64 User Presets available. The Factory Presets will not allow you to store any changes to them. The User Presets are locations where your creations may be stored. From the factory, the 64 User Presets are exact duplicates of the 64 Factory Presets. This allows you to make your own Presets without the worry of losing any of the sounds that the RP2000 came with.

When you select a Preset, the name of the Preset will be shown in the green section of the Display and the number of the Preset will be shown in the red section of the Display. An LED to the right of the Display will light to indicate whether you are in a User Preset or a Factory Preset.

Performance Mode

When you first apply power to the RP2000, it will power up in Performance mode. Performance mode is the mode used while you are performing. From Performance mode, you have access to all of the Presets within the RP2000 with your choice of using either Preset Mode or FX Mode.



Preset Mode

While in Preset mode, the Numeric Display will show the currently selected Preset's name and number. The horizontal LEDs on the Matrix will indicate the Effects which are active in the Preset. In Preset mode, the 1-4 Footswitches will call up different User Presets. The Data Wheel must be used to access Factory Presets.

FX Mode

FX Mode is another mode of operation which can be used during a performance. The only difference between Preset Mode and FX Mode is in the functions of the 1-4 footswitches. In FX Mode, footswitches 1-4 will turn on and off specific effects within the currently selected Preset, much the same as if you were using individual stomp box type effects. The FX Mode button (located to the right of the Data Wheel) is used to switch between Preset and FX Modes. When the button is lit, the FX mode is active.

The Footswitches

The RP2000 has 6 footswitches which can perform different functions. These functions are permanently assigned and cannot be reconfigured (except for the Control switch). In Preset Mode, Footswitches 1-4 will select Presets 1-4 in every User Bank. In FX Mode and Edit Mode, Footswitches 1-4 will turn effects on or off and change Amp Channels within a Preset. Depending on which effects are active in the current Preset, these switches may have one or more LEDs lit, indicating the status of these effects. The Amp Channel Footswitch will light either green or red indicating whether the green or red Amp Channel is selected. In the Learn-A-Lick Mode, the 1-4 switches will activate Learn-A-Lick's Stop, Play, Reverse, or Record functions. Pressing and holding the 1 and 2 switches simultaneously will access the Tuner mode. Pressing and holding the 3 and 4 switches simultaneously will bypass the RP2000.

The Bank and Control switches are located on the upper rear. In Preset mode, the Bank switch will advance Banks with single presses or reverse Banks if held down. In FX mode, the Bank switch will advance Presets with single presses or reverse Presets if held down. The Control switch is used to control a Parameter of your choice in real time, or to change Banks. Pressing and holding the Bank and Control switches simultaneously will access Learn-A-Lick Mode.

The Expression Pedal

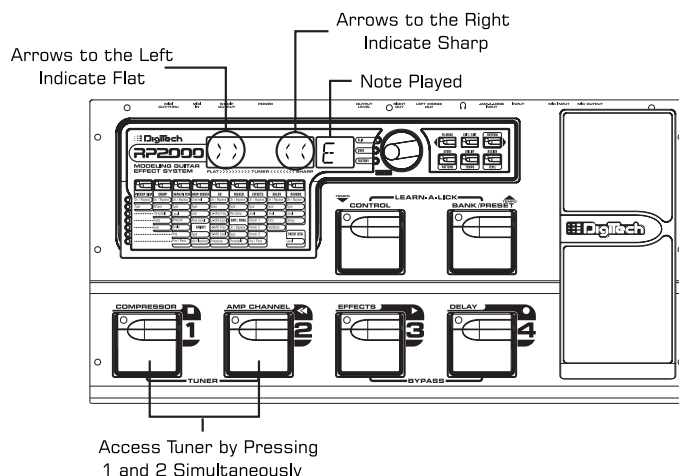
As you go through the different Presets in the RP2000, you will find that the expression pedal has different functions. This pedal can be assigned to control one of several different parameters in each Preset. Rocking the pedal back and forth will change the value of the assigned parameter. You can assign minimum and maximum values (stop points) for each parameter that you control with the pedal. The Expression Pedal also includes a feature called V-Switch which allows you to override the Pedal assignment. Applying extra pressure to the toe of the Expression Pedal, will enable the selected effect in the Wah/Pitch module, and the Expression Pedal's function will change to act as the Wah or Whammy™ if one of those is the selected effect. For more on assigning the expression pedal, see page 29.

Bypass Mode

The RP2000 can be bypassed for a clean, unprocessed, straight guitar tone. To bypass the RP2000, press the footswitch representing the currently active Preset (the 1-4 footswitch that is lit). To bypass the RP2000 while in FX Mode, press the 3 and 4 footswitches simultaneously. This disengages all Modeling and effects. The Display will flash *BYPASS* and all LEDs in the Matrix will turn off while the Preset is bypassed. Pressing any footswitch will exit Bypass and return to the last Preset used. None of the Matrix or Programming buttons are available in Bypass mode.

Tuner Mode

The Tuner in the RP2000 allows you to quickly tune or check the tuning on your guitar. Enter Tuner mode by pressing and holding the 1 and 2 footswitches simultaneously. The Display will briefly show *TUNER* indicating that you are in Tuner mode. To begin tuning, play a note on your guitar (a harmonic at the 12th fret usually works best). The red display window will show the note being played, and the green section of the display will indicate whether you are sharp or flat. Arrows to the left indicate the note is sharp and should be tuned down. Arrows to the right indicate the note is flat and should be tuned up. When your note is in tune, the Display will show --> <--.



In Tuner mode, you can change your tuning reference by rotating the Data Wheel when *REF* is showing in the Display. The default factory setting is :A=440 Hz. The tuning reference ranges from 427 Hz to 453 Hz, which is the equivalent of ± 50 cents (1/2 semitone) in either direction from 440 Hz. When you scroll down from 427 Hz, you will also find alternate dropped tunings. Alternate tunings are A = Ab (415), A = G (392), and A = Gb (369). The display window will briefly flash the currently selected tuning preference.

Exit tuner mode by pressing any of the footswitches.

Edit Mode

The Edit Mode of the RP2000 allows you to customize Presets to suit your particular needs and applications. Pressing the Edit/Exit button allows you to access, replace, or change any aspects of the effects which make up the Preset. Once in the Edit mode, the buttons in the matrix can be used to access the effects. Successive presses of each button will advance through all parameters associated with the selected effect. Rotating the Data Wheel will change the value of the currently selected Parameter. The LED in the Edit/Exit button will light while in the Edit mode. Press the Edit/Exit button again to exit the Edit mode. See page 11 for more information on editing functions.

Rhythm Mode

The RP2000 includes several sampled drum patterns which are useful for rehearsing different riffs in an assortment of musical styles and time signatures. Pressing the Rhythm button from any mode (except for Store, Utility, and Assign modes) will enable Rhythm mode and start playback of the drum loop. If Rhythm mode is enabled from Performance mode, the Store, Utility, and Assign buttons will all light up indicating that their functionality has changed to Pattern, Tempo, and Level respectively. Pressing any of these buttons at this time will display the secondary function for 5 seconds, at which time it can be modified by rotating the Data Wheel. After 5 seconds, the display will return to the display prior to pressing the Rhythm button. Press the rhythm button again to stop playback of the drum loop. See page 28 for more information on Rhythm mode.

Store Mode

The Store button is used to save any modifications that you had made to a Preset, rename a Preset, or to copy a Preset to a different location. The first press of the Store button will enter the store mode. The first letter of the Preset name will begin to flash. Pressing the FX mode, or Rhythm buttons will select the next character to the right or left. Rotating the Data Wheel will change the character. Pressing the Store button again will cause the red numeric display to flash indicating that you can select the destination Preset location by rotating the Data Wheel. Pressing the Store button a third time will execute the Store function. See page 12 for more on the storing procedure.

Utility Mode

The Utility button is used to gain access to various global functions of the RP2000. Pressing the FX Mode, or Rhythm buttons will move forward and backwards through all of the available Utility menu selections. The Utility selections include: *STEREO* or *MONO* output selections, *CABGLB* (Global Cabinet Emulator), *V SWCH* (Virtual Switch sensitivity), *VOLUPD* (Volume Pedal Update), *DRYTRK* (Dry Track enable), *BNKNAM* (Bank Names), *MIDICH* (MIDI Channel), *BLKDMP* (Bulk Dump), *U DMP* (User Dump), *M MAP* (MIDI Mapping), *MERGE* (MIDI Merge), *PDLCAL* (Expression Pedal Calibration), and *FACTRST* (Factory Reset). Rotating the Data Wheel will change the selected Utility Parameter value or status. Pressing the Edit/Exit button will exit the Utility menu and return the RP2000 to the previous mode. See page 30 for detailed information regarding the Utility functions.

Assign Mode

The RP2000 allows you to assign Parameters to the Expression Pedal, the Control Footswitch, or two internal LFOs. Enter the Assign mode by pressing the Assign button. The Rhythm and FX Mode buttons can be used to move forwards or backwards through the possible controllers. Your choices include: *EXPDL* (Expression Pedal), *CNTFS* (Control Footswitch), *LFO1* (Low Frequency Oscillator 1), and *LFO2* (Low Frequency Oscillator 2). As you move through the menu, each controller will be followed by a programmable minimum and maximum value the assigned parameter will be able to reach. See page 28 for more information on assigning parameters to a controller.

Learn-A-Lick Mode

The Learn-A-Lick function allows you to record a 10 second passage of music and play it back as slow as 1/4 speed with no change in pitch. This is very useful for picking out the notes of a fast solo passage.

There are 6 functions for Learn-A-Lick. They are:

- Stop (Controlled by the number 1 Footswitch)
- Play (Controlled by the number 3 Footswitch)
- Tempo Down (Controlled with Control Footswitch)
- Rewind (Controlled by the number 2 Footswitch)
- Record (Controlled by the number 4 Footswitch)
- Tempo Up (Controlled by the Bank Footswitch)

Using Learn-A-Lick

1. Connect the output of your CD or tape player headphone output to the Jam-A-Long input jack on the rear panel using an 1/8" stereo plug. Set the level of the CD/tape player to a desired listening level.
2. Cue up to the passage you want to record and hit pause on the CD or tape player.
3. Press and hold the Bank and Control switches to enter Learn-A-Lick mode. The display will read: *LALICK*.
4. Release the pause button on your playback device and press the number 4 (Record) Footswitch when you are ready to begin recording the passage. The display will read: *REC* and recording will begin. The red Display will provide a time elapsed reference while recording. When recording is completed, the phrase will be set to an auto-loop playback mode indicated by *PLAY* in the Display. Press stop or pause on the CD or Tape player.
5. Press the Control (Tempo Down) Footswitch to slow the playback down to 1/4 speed in 1/8th speed intervals. Press the Bank (Tempo Up) Footswitch to increase the playback speed to normal at 1/8 speed intervals. Your interval choices include: *FULL*, *7/8*, *3/4*, *5/8*, *1/2*, *3/8*, and *1/4* speeds.
6. Pressing the number 2 (Rewind) Footswitch steps back through the loop at 1 second intervals.
7. The Expression Pedal will control output level of the recorded phrase.
8. To stop the playback, press the number 1 (Stop) Footswitch.
9. To record a new passage, press the number 4 (Record) Footswitch again.
10. To exit the Learn-A-Lick mode, press and hold the Control and Bank switches, or press the Exit button.

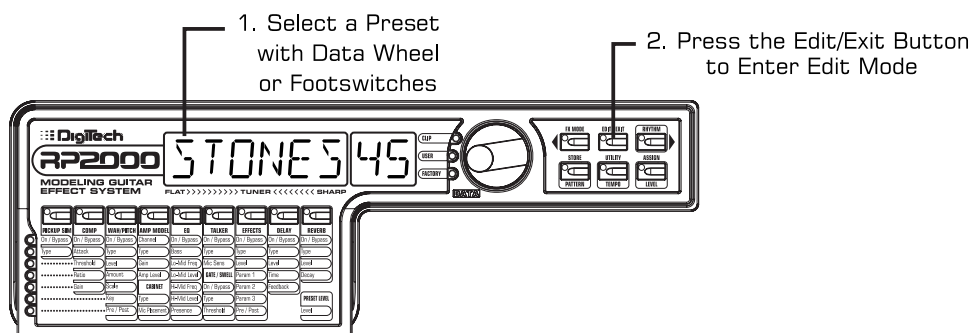
Jam-A-Long

The Jam-A-Long feature allows you to connect a Tape or CD to the RP2000, and Jam with your favorite artists. The signal from your tape or CD player is output through the left and right, and headphone outputs of the RP2000. To use the Jam-A-Long feature, connect the headphone output of your tape or CD player to the Jam-A-Long input on the rear panel of the RP2000 using an 1/8" stereo cable, and press play on your tape or CD player.

Section Two - Editing Functions

Editing/Creating Presets

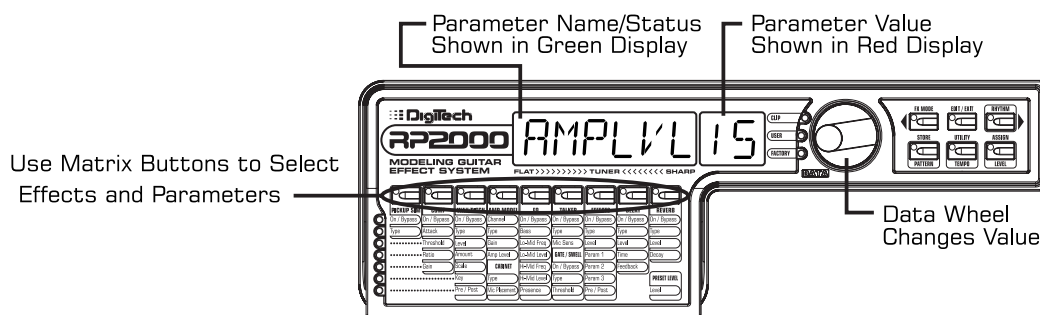
Creating your own signature sound with the RP2000 is easy and intuitive. The RP2000 lets you create your own Presets, or fine tune existing Presets to suit your needs. When creating or editing a sound, you must first start with one of the User or Factory Presets. It is not possible to start with a completely empty Preset. The Preset number does not necessarily need to be the location which you intend to have it reside, as you can save your creation to any User Preset location during the store process. Pick a Preset which will be your starting point by using the Footswitches or Data Wheel. Once you have found a Preset that you wish to edit, press the Edit/Exit button once. This will take you into the Editing mode.



While in Edit mode, the Matrix buttons can be used to access all the different amp and guitar models, effects, and parameters contained in the RP2000.

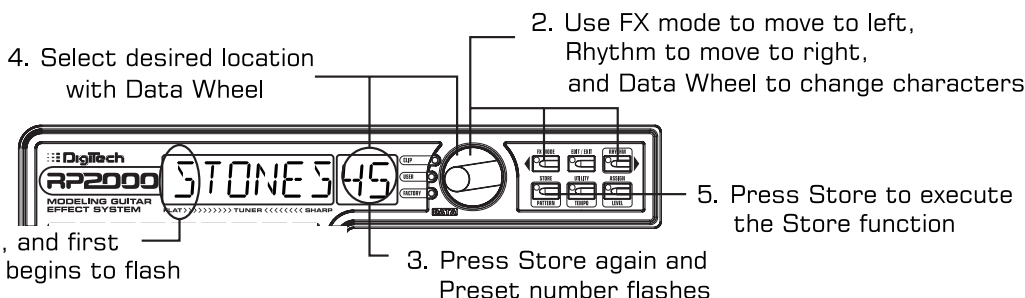
The Matrix

The Matrix is where all Effects and Parameters are selected for editing. In Edit mode, the buttons over each column of effects are used to access the corresponding effect type. The currently selected Effect group will be represented by an LED lighting over the selected Effect column. Successive presses of the same button will advance through all parameters associated with the selected Effect group. The selected Effect, Parameter, or status will be shown in the green section of the Display, as well as represented by LEDs lighting in the rows and columns of the Matrix.



Following the two LEDs across the matrix to the point where they intersect, indicates the parameter that you are about to edit. The Data Wheel will increase or decrease the value of the parameter that has been selected and you will hear the change in real time. When changing Parameter values, the Store LED will light indicating the Preset has been modified. If you exit Edit mode after changing the Parameters and then return to Edit mode, the last viewed Parameter will be displayed. When the Preset has been edited to your liking, you may store your settings to any of the 64 User Preset locations. Remember that the User Presets are duplicates of the Factory Presets so, you are not at risk of losing any of the original sounds that the RP2000 came with. Changing Presets, or turning the power off before storing any changes will erase your changes and revert to the stored values for the selected Preset.

Once you have modified the Parameters and Effects to your liking, you can store them to a User Preset location. When editing a Preset, the Store LED will light indicating that you have changed a Parameter and need to store the changes. The following steps outline the procedure for storing a Preset



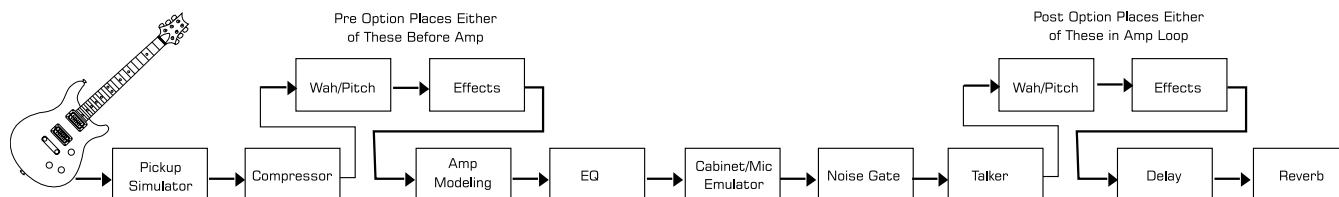
1. Press the Store button once and the RP2000 will enter a naming mode. The first letter of the currently loaded Preset name will begin to flash.
2. Pressing the Rhythm button will select the next character to the right, and pressing the FX Edit button will select the next character to the left. Rotate the Data Wheel to change the selected character.
3. Once you have entered the desired name for the Preset, press the Store button again. The current Preset location will flash in the Display. This is asking you to select a User Preset location where you want your sound to reside.
4. Select the User Preset location using the Data Wheel.
5. Press the Store button again to save the changes.

The procedure for copying one Preset to another Preset location is the same. Simply use the Data Wheel to select the Preset that you want to copy, then follow the steps listed above.

Section Three - Effects and Parameters

About the Effects

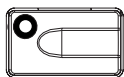
The RP2000 can be thought of as several different “virtual” amplifiers, and individual, hi-tech stomp boxes. With stomp boxes, the order in which they are connected can make a big difference in how good the overall sound is. Whether the stomp boxes are placed before the amp, or in the amp’s effects loop will also make a difference. The RP2000 has the Effects connected in the most logical, and best sounding order. However, you do have the choice of running the effects found in the Wah/Pitch, and Effects columns either before or after the Amp Modeling.



Effect Definitions

Each Effect within the RP2000 is fully programmable to suit your personal tastes and application. Understanding how these Effects will alter the sound, and how each Parameter will alter the Effect will help you achieve the sound you are looking for. The following overview of the RP2000’s effects outlines what each Effect and Parameter does.

Pickup Simulator



PICKUP SIM

On / Bypass

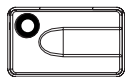
The Pickup Simulator applies the warmth and thickness of a double coil humbucker pickup to a single coil guitar, or the unique thin sound of a single coil pickup to a guitar with a humbucker. This allows you to have the best of both worlds without having to change guitars during a performance.

This Parameter turns the Pickup Simulator on and off.

Type

The Type Parameter selects whether you are trying to make a humbucker sound like a single coil (displayed as *HB > SC*), or a single coil sound like a humbucker (displayed as *SC > HB*).

Compressor



COMP

On / Bypass

This Parameter turns the Compressor on and off.

Attack

The Attack is the length of time it takes the Compressor to compress the signal. Attack times include: *SLOW*, *MEDIUM*, and *FAST*.

Threshold

This parameter tells the Compressor when to start compressing. It is the signal strength required before the compression kicks in. Low Threshold settings (larger negative numbers) will activate the Compressor with weaker signals. Higher settings will require a stronger signal to activate compression. Parameter ranges from -60 dB to 0 dB.

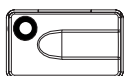
Ratio

Controls the amount of compression applied to the signal once the Threshold has been exceeded. A Ratio of 2:1 means that when an incoming signal exceeds the threshold by 2 dB, the compressor will only allow the output signal to increase by 1 dB. Higher settings yield a tighter, sound and increase sustain. Lower settings allow better dynamics. Ranges from 1.2 to INF (infinity to 1).

Gain

This is the output volume from the Compressor. This parameter should be used to balance the level of the Compressor in order to achieve unity gain. It is possible to clip other effects in the RP2000 by setting the Compressor Gain too high. Ranges from 0 dB to 20 dB in 1 dB increments.

Wah/Pitch



WAH/PITCH

On / Bypass

Type

The Wah/Pitch column in the RP2000 is a multi-function module, allowing you to select your choice of classic Wahs, Pitch Shifting, Detuning, Whammy™, or Intelligent Harmonies. Only one effect from this column can be used at a time. After choosing the type of effect from this module, you can then adjust the individual parameters of the selected effect.

This Parameter is used to program the on/off status of the Wah/Pitch module. The on/off status of these effects can also be switched using the V-Switch. Engaging the V-Switch will enable the Wah/Pitch module, and over ride the Expression Pedal assignment making the Expression Pedal act as a Wah, Whammy™. Upon disengaging this switch, the Expression Pedal will revert back to controlling the assigned Parameter for the current Preset. See page 29 and 31 for information on the Expression Pedal, and the V-Switch.

This Parameter allows you to select the specific type of effect from this group. The Types available include: *CRYWAH* (a traditional sounding Wah), *FULWAH* (a full range Wah), *PITCH* (Pitch Shifting), *DETUNE* (Detuning), *WHAMMY* (Pitch Bending), and *HARMONY* (Intelligent Harmonies). The following list describes each of these Effects and their associated Parameters in detail.

Wah Wah

Wah Wah is an effect that is controlled by the Expression Pedal and adds a fixed gain increase to a narrow band of frequencies. The frequency changes as the Pedal is rocked back and forth resulting in the guitar sounding as if it is saying Wah. The RP2000 includes two types of Wah to choose from: *CRYWAH* (CryWah) and *FULWAH* (Full Range Wah). Cry is a traditional sounding Wah typical of those used in the 60's and 70's. Full Range Wah is a wider sweeping Wah with a more modern sound. The only Parameter available with the Wah settings is the Pre/Post Parameter. See page 15 for more information on the Pre/Post Parameter.

Pitch

Pitch Shifting is an effect which makes a copy of your incoming signal, and then shifts the pitch of the copy to a different note. As you play one note the Pitch Shifter is simultaneously playing a note higher, or lower with you. The Pitch Shifting in this module is best when used with single notes.

Amount

The Amount Parameter adjusts the interval of the shifted note, Ranges from *SHF -24* (two octaves below), to *SHF +24* (two octaves above), in 1 semi-tone steps.

Detune

A Detuner makes a copy of your incoming signal, takes the copied signal slightly out of tune from the original, and mixes the two signals together. The result is doubling as if two guitars were playing together.

Amount

The Amount adjusts the extent that the Detuner will take the copied signal out of tune. This is measured in cents (there are 100 cents to one semi-tone). Ranges from *-30* cents (1/3 of a semitone below) to *+30* cents (1/3 of a semitone above), and is adjustable in 1 cent intervals.

Whammy™

Whammy™ is an effect that can bend the pitch of the incoming signal, or mix a harmony with the original signal and bend the pitch of the harmony. The Whammy™ requires the use of the Expression Pedal. As you rock the pedal forward, the note will bend either up or down at intervals you have selected.

Amount

The Amount selects the range and direction of the pitch bend. The Whammy™ Amounts include:

Whammy (no Dry Signal)

1OCTUP (1 octave above)
2OCTUP (2 octaves above)
2NDOWN (a second below)
REV2ND (a second below reversed pedal action)
4THDOWN (a fourth below)
1OCTDOWN (an octave below)
2OCTDOWN (2 octaves below)
6OCTDOWN (6 octaves below)

Harmony Bends (Dry Signal Added)

M3>MA3 (a minor third to a Major third)
2NDMA3 (a second above to a Major third above)
3RD4TH (a third above to a fourth above)
4TH5TH (a fourth above to a fifth above)
5THOCT (a fifth above to an octave above)
HOCTUP (one octave above)
HOCTDN (one octave down)

Harmony

The Harmony module functions much the same as a Pitch Shifter except that a Pitch Shifter stays parallel to your note at the specified interval, and the Harmony module knows which notes to make sharp or flat in order to keep the shifted pitches within the specified key and scale. The Harmony module lets you select the key, scale and amount of shifting in the signal and all shifted notes will remain diatonically correct.

Amount

The Amount Parameter selects the Harmony interval. The Harmony interval choices include: *OCTDN* (octave down), *7THDN* (a seventh below), *6THDN* (a sixth below), *5THDN* (a fifth below), *4THDN* (a fourth below), *3RD DN* (a third below), *2ND DN* (a second below), *2NDUP* (a second above), *3RDUP* (a third above), *4THUP* (a fourth above), *5THUP* (a fifth above), *6THUP* (a sixth above), *7THUP* (a seventh above), and *OCTUP* (an octave above).

Scale

This Parameter is used to select the reference scale the Harmony module will use. There are 10 Scale choices including: *MAJOR* (Major), *MINOR* (Minor), *DORIAN* (Dorian), *MIXLYD* (Mixolydian), *LYDIAN* (Lydian), *HARMIN* (Harmonic Minor), *BLUES* (Blues), *MAJUPNT* (Major Pentatonic), *MINPNT* (Minor Pentatonic), and *WHOLET* (Whole Tone). The Scale Parameter is only available with the Harmony selection.

Key

The Key Parameter is used to select the root key of the scale that will be used in the Harmony processor. There are 12 possible choices for the Key ranging from C to Bb. The Key Parameter is only available with the Harmony selection.

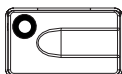
Level

The Level Parameter adjusts the volume of the shifted pitch for the Pitch Shifter, Detuner, Whammy™, and Harmony effects. It is not available for the Wah effect.

Pre / Post

This Parameter selects whether the effects in Wah/Pitch column will be placed *PRE*: in the signal path before the amp modeling (as if you were connecting stomp boxes in between your guitar and amp), or *POST* placed after the amp modeling (as if they were in the effects loop of an amplifier).

Amp Modeling



AMP MODEL

Amp Modeling is a new technology which applies the tone of different amp types to your guitar signal. The RP2000 has 10 extremely flexible Amp Models, and 2 Acoustic Guitar Models. These Models are capable of producing emulations of several popular modern and vintage amps, from the smoothest of the blues tones to the full shred gain of a cranked up stack. The Model module also has 2 acoustic guitar simulations. The Modeling section includes two channels (Red and Green). Separate Models, Gain, EQ, and Level settings can be assigned to each Channel. You can then toggle between Amp Channels using the number 2 (Amp Channel) footswitch in FX Mode.

Channel

This Parameter is used to select one of the two Amp Channels for editing. The Red and Green Channels are both fully programmable with Amp Type, Gain, Levels, and EQ. One Channel can be used for a clean sound and the other can be used for a distorted sound. Switching channels occurs instantly giving you more flexibility during performances. The color of the LED above the Channel footswitch and the Amp Model LED in the Matrix will change to reflect the active Channel.

Type

This Parameter selects the Amp Model, or Acoustic Model you wish to emulate. The choices include:

<i>BLKFAC</i> (based on a '65 Fender Twin Reverb)	<i>CLNTUB</i> (a clean combo setting)
<i>BOU1Q</i> (based on a Matchless DC30)	<i>CRUNCH</i> (a nice crunchy combo)
<i>RECTIF</i> (based on a Mesa Dual Rectifier)	<i>HIGAIN</i> (a smooth singing lead tone)
<i>HOTROD</i> (based on a Mesa Boogie Mark II C)	<i>ACOUS1</i> (a flat top acoustic guitar)
<i>TWEED</i> (based on a '57 Fender Tweed Deluxe)	<i>ACOUS2</i> (a piezo acoustic guitar)
<i>CLAS A</i> (based on a Vox AC30 top boost)	<i>DIRECT</i> (straight guitar with no modeling)
<i>BRTSTK</i> (based on a Marshall JCM900)	

Gain The Gain adjusts the amount of drive applied by the Amp Model. Higher amounts of Gain will produce more break up or distortion. Gain ranges from 0 to 99. Gain is not available on the Acoustic or Direct Modeling selections.

Amp Level Amp Level adjusts the overall volume for the selected Amp Model. Amp Level ranges from -15dB to +15dB.

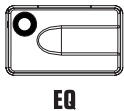
Cabinet Modeling

CABINET The Cabinet Modeling simulates different types of microphoned speaker cabinets. You have your choice of Cabinet Type, and Mic Placement in relationship to the speaker cabinet. The Cabinet Modeling Parameters are accessed by using the Amp Model button.

Type The Type Parameter selects the kind of speaker cabinet that will be emulated. Your choices include: *NONE*, *DARK*, *WARM*, and *BRIGHT*.

Mic Placement The Mic Placement Parameter simulates the placement of the microphone in relation to the speaker cabinet. Placing the mic at the center of the speaker will render a fuller sound, while placing the mic towards the edge of the speaker will sound brighter. Mic Placement ranges progressively from: *MICP 1* (the edge of the speaker) to *MICP 10* (the center of the speaker).

EQ



Equalization is an extremely useful tool used to further shape the tonal response of your guitar signal. The EQ in the RP2000 is similar to the tone knobs on an amplifier. One advantage that the EQ in the RP2000 has over a conventional amp is that it allows you to choose the frequency of the low mid and high mid as well as the gain applied to the frequency. This gives you the freedom to select the exact tone which needs adjustment rather than using a generic frequency.

On / Bypass This Parameter is used to turn the EQ on and off.

Bass The Bass Parameter adjust the amount of low end enhancement applied to your signal. The Bass enhancement ranges from -12dB to +12dB.

Lo-Mid Freq The Lo-Mid Frequency Parameter lets you select the exact frequency center that will be enhanced by the Low-Mid Level. The Low-Mid Frequency ranges from 250 Hertz to 2000 Hertz.

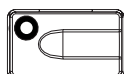
Lo-Mid Level The Lo-Mid Level adjusts the amount of enhancement applied to the selected Low-Mid Frequency. The Low-Mid Level ranges from -12dB to +12dB.

Hi-Mid Freq The Hi-Mid Frequency Parameter lets you select the exact frequency center that will be enhanced by the Hi-Mid Level. Hi-Mid Frequency ranges from 800 Hertz to 5000 Hertz.

Hi-Mid Level The Hi-Mid Level adjusts the amount of enhancement applied to the selected Hi-Mid Frequency. The Hi-Mid Level ranges from -12dB to +12dB.

Presence The Presence Parameter adjusts the amount of treble enhancement applied to your signal. The Presence ranges from -12dB to +12dB.

Talker™



TALKER

The Talker™ is an effect designed exclusively by DigiTech, which enables your instrument to speak. The Talker™ requires a microphone to be connected to the Mic Input on the rear panel of the RP2000. As you speak into the microphone, your instrument will mimic any words that you say. The Talker™ effect is produced only at the 1/4" left and right outputs. When the Talker™ is bypassed, the mic signal is passed from the XLR mic in to the XLR mic out unaffected. There are four types of Talker™ selections to choose from.

On / Bypass

This Parameter is used to turn the Talker™ on and off.

Type

This Parameter is used to select the 4 Talker™ types. Ranges from *TYPE 1* (deep tonal characteristics), to *TYPE 4* (bright tonal characteristics).

Mic Sens

This Parameter is used to adjust the microphone sensitivity for the Talker™ effect. The Talker™ must have an appropriate input level from your microphone in order to work properly. If the microphone input is too weak, the Talker™ will have trouble tracking. If the input is too strong, the Talker™ will clip making the words unintelligible. The Mic Sensitivity ranges from 1 being the least sensitive to 99 being the most sensitive.

Noise Gate

GATE / SWELL

A Noise Gate is designed to eliminate noise while you are not playing. It looks at the strength of the incoming signal and if the signal exceeds the value set by the Threshold Parameter, the Gate will open and allow the signal to pass. If your signal level drops below the Threshold, the Gate will close and allow nothing through until the Threshold is exceeded again. The Type parameter allows you to select between a normal Noise Gate, or an automatic volume swell effect taking up to 2 seconds for the volume to fade in. The Noise Gate is accessed by using the Talker™ button in the Matrix.

On / Bypass

This Parameter turns the Noise Gate on and off.

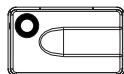
Type

This Parameter is used to select between the Noise Gate settings or the Automatic swell settings. Your choices include: *NREJECT* (a normal type of Noise Gate noise reduction), to *SWELL 1* (being a quick volume swell) through *SWELL 10* (being a slow volume swell).

Threshold

Sets the signal strength level required for the Noise Gate to open or close. Ranges from 1 (weakest) to 99 (strongest).

Effects



EFFECTS

The Effects column in the RP2000 is a multi-function module, allowing you to select effects such as; Chorus, Flanger, Phaser, Tremolo, Panner, Vibrato, Rotary Speaker, AutoYah™, YahYah™, Envelope, Detune, and Pitch Shift effects. Only one of these effects can be used at a time. After selecting the type of effect in this module, you can then adjust the effects individual parameters.

On / Bypass

This Parameter turns the Effects module on and off.

Type

This Parameter allows you to select the specific type of effect from this group. The following list describes each of these Effects and their associated Parameters in detail:

CHORUS (Chorus)

A Chorus adds a short delay to your signal and modulates the delay time which takes the delayed signal slightly in and out of tune. The delayed signal is then mixed back with the original signal to create a thicker sound as if two guitars were playing the same part. Chorus Parameters are as follows:

- Param 1 **SPEED** - Controls the rate that the Chorus modulates at. Ranges from 0 to 99.
- Param 2 **DEPTH** - Sets the amount of intensity in the Chorus. Ranges from 0 to 99.
- Param 3 **DELAY** - Adjusts the Delay time used in the Chorus. Ranges from 0 to 40 milliseconds.

FLANGE (Flanger)

A Flanger uses the same principle as a Chorus does with a modulating delay. The difference being that a Flanger uses a shorter delay time and adds regeneration (or repeats) to the modulating delay. This results in an exaggerated up and down sweeping motion to the effect. Flange Parameters are as follows:

- Param 1 **SPEED** - Controls the rate that the Flange modulates at. Ranges from 0 to 99.
- Param 2 **DEPTH** - Sets the intensity in the Flange effect. Ranges from 1 to 15.
- Param 3 **REGEN** - This Parameter sets the amount of regeneration which is perceived as the up and down motion of the Regeneration ranges from 0 to 99.

PHASER (Phaser)

A phaser splits the incoming signal, and then changes the phasing of the signal. This signal is then taken in and out of phase and mixed back in with the original signal. As the phasing changes, different frequencies get canceled resulting in a warm sort of twisting sound. The RP2000 breathes new life into this classic effect by adding regeneration.

- Param 1 **SPEED** - Controls the rate of the Phaser sweep. Ranges from 0 to 99.
- Param 2 **DEPTH** - Sets the intensity or amount of Phase change in the split signal. Ranges from 0 to 99.
- Param 3 **REGEN** - Controls the amount of phased sound fed back to the input of the Module. High regeneration settings produce dramatic and interesting unnatural sounds. Ranges from 0 to 99.

TREMOLO (Tremolo)

A Tremolo effect modulates the volume of the incoming signal at a steady, even rate. The incoming signal will go back and forth between getting louder and softer. It is kind of like having a motor on your guitars volume knob which opens and closes the volume at an even rate.

- Param 1 **SPEED** - Controls the rate of volume modulation. Ranges from 0 to 99.
- Param 2 **DEPTH** - Adjusts the intensity of the Tremolo effect. Ranges from 0 to 99.

PANNER (Panner)

An auto panner is a modern relative of the tremolo that modulates the sound from left to right at a given rate. Parameters are as follows:

Param 1 **SPEED** - Controls the Panning speed (speed of modulation). Ranges from 0 to 99

Param 2 **DEPTH** - Adjusts the intensity of the Panning effect. Ranges from 0 to 99.

VIBRATO (Vibrato)

Vibrato was one of the first real effects, and appeared mostly on early guitar amplifiers. A Vibrato effect modulates the pitch of the incoming signal at a steady, even rate. The incoming signal will go slightly in and out of tune as the pitch modulates.

Param 1 **SPEED** - Controls the rate of frequency modulation. Ranges from 0 to 99.

Param 2 **DEPTH** - Adjusts the intensity of the Vibrato effect. Ranges from 0 to 99.

ROTARY (Rotary Speaker)

Rotary Speaker is an emulation of a device that included a spinning horn and woofer. The rotation of these two speakers produced an interesting combination of the sound panning from side to side, as well as a slight pitch change due to the sound coming towards, and then going away from the listener. The rotary speaker parameters are as follow:

Param 1 **SPEED** - Controls the rate of the simulated spinning speakers. Ranges from 0 to 99.

Param 2 **DEPTH** - Controls the stereo separation of the perceived rotation. Ranges from 0 to 99.

AYAH (AutoYah™)

An AutoYah™ combines the characteristics of a Wah and a Flanger together creating an almost human vowel characteristic. The AutoYah™ then provides animation to the sound automatically based on string attack. The AutoYah™ parameters are as follow:

Param 1 **SPEED** - Determines the rate of sweep in the YahYah™ effect. Ranges from 0 to 99.

Param 2 **DEPTH** - Controls the intensity of the YahYah™ effect. Ranges from 0 to 99.

Param 3 **REGEN** - Controls the throaty quality of the YahYah™. Ranges from 0 to 99.

YAHYAH (YahYah™)

The YahYah™ is another effect exclusive to DigiTech products. Like the AutoYah™, it combines the characteristics of a wah and a flanger together providing a unique talk box type of effect, but is controlled by the Expression Pedal. The YahYah™ parameters are as follow:

Param 1 **PEDAL** - Determines the quantity of sweep in the YahYah™ effect. Assigning this parameter to the Expression Pedal will render the best results for this effect. Ranges from 0 to 100.

Param 2 **DEPTH** - Controls the intensity of the YahYah™ effect. Ranges from 0 to 99.

Param 3 **REGEN** - Controls the throaty quality of the YahYah™. Ranges from 0 to 99.

Section Three - Effects and Parameters

ENVLOP (**Envelope Filter**)

The Envelope Filter is an automatic Wah. The Envelope alters your sound based upon how hard you play. The softer that you play, the less intense the sweep of the Wah will be. The harder you play, the more intense the sweep will be.

Param 1 ENVTYPE - Adjusts the range of the Envelope sweep. Types include 1 through 3.

Param 2 ENVSEN - Adjusts the response of the Envelope in relation to the attack strength of the incoming signal. Ranges from 0 to 99.

DETUNE (**Detune**)

A Detuner will make a copy of your incoming signal, take the copied signal slightly out of tune from the original, and mix the two signals together. The result is a doubling type of effect as if two guitars were playing together.

Param 1 SHF - Adjusts the extent that the Detuner will take the copied signal out of tune. This is measured in cents (there are 100 cents to one semi-tone). Ranges from -30 cents to +30 cents.

PITCH (**Pitch Shift**)

The Pitch Shifting in this column is like the pitch shifting in the Wah/Pitch column. It simply copies the signal, then shifts the pitch of the copy to a different note. The Pitch shifting from this module works well with multiple notes played simultaneously. Pitch was included in this group of Effects to provide the flexibility of using effects such as Wah in conjunction with pitch shifting.

Param 1 SHF - Controls the interval of the shifted pitch. Ranges from -24 Semitones (two octaves below), to +24 semitones (two octaves above).

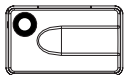
Level

Controls the overall volume or mix level of processing in the Effects module. Ranges from 0 to 99.

Pre / Post

This Parameter selects whether the effects in this column will be placed *PRE*: in the signal path before the amp modeling (as if you were connecting stomp boxes in between your guitar and amp), or *POST* placed after the amp modeling (as if they were in the effects loop of an amplifier). If you are not sure whether to select pre or post, listen to both to determine which sounds best.

Delay



DELAY

On / Bypass

Delay is an effect that will record a portion of the incoming signal, and then play it back a short time later. It can repeat the recording several times, or just once. This type of effect is also referred to as an echo because it basically echoes the original signal. Delay Parameters are as follows:

This Parameter turns the Delay on and off.

Type

Determines the type of delay. The RP2000 Delay employs five types of Delay circuits: *MONO* (Mono Delay with clear concise repeats), *ANALOG* (Analog Delay typical of the older delays with deterioration of each repeat), *PPONG* (Ping Pong Delay with clear concise repeats that alternate between the left and right outputs), *ALGPNG* (Analog Ping Pong with deteriorating repeats which bounce from side to side), and *REVERS* (Reverse Delay which plays the repeats backwards).

Level

Controls the volume level of the delay. Ranges from 0 to 99. The Level Parameter controls the Mix on the Reverse Delay with 0 being completely dry (no Delay signal), and 99 completely wet (Delay signal only).

Section Three - Effects and Parameters

- Time** Sets the time interval between repeats. The available delay time ranges are 10 milliseconds (1/100 of a second) to 3.0 seconds.
- Feedback** Controls the number of repeats for the Delay. Ranges from 0 to 99, and *RPHOL* (infinite repeats). The Feedback Parameter is not available with the Reverse Delay.

Reverb



Ambience, or reverberation, is produced when sound energy is reflected off room surfaces and objects. Using reverb in recorded program material gives the listener a sense that the material is being performed in an actual room or hall. It is this similarity to actual acoustic spaces that makes reverberation a useful tool in recorded music. Reverb Parameters and their functions are as follows:

- On / Bypass** This Parameter turns the Reverb on and off.
- Type** Allows you to choose the simulated ambience or environment you want to use. There are ten available type selections:
- | | | | |
|---------------|--------------|---------------|---------|
| <i>CLUB</i> | =Club | <i>GARAGE</i> | =Garage |
| <i>STUDIO</i> | =Studio | <i>HALL</i> | =Hall |
| <i>BATHRM</i> | =Bathroom | <i>CHURCH</i> | =Church |
| <i>PLATE</i> | =Plate | <i>ARENA</i> | =Arena |
| <i>STAGE</i> | =Sound Stage | <i>SPRING</i> | =Spring |

- Level** Controls the amount of reverb signal to be mixed in with the dry signal. Ranges from 0 to 99.
- Decay** The amount of time it takes for the Reverb to fade to inaudibility. Ranges from 1 to 10.

Preset Level



The RP2000's Preset Level controls the overall volume of the selected Preset. The level can be controlled with the Expression Pedal for balancing levels in real-time during live performance. It is also useful to lower the overall digital effects level if clipping occurs. The Preset Level is accessed by using the Reverb button, and is variable from 0 to 99.

A Guided Example

Choose a Preset

Enter the Edit Mode

Select the Pickup Simulator Type

Turn the Compressor Off

Select a Classic Wah

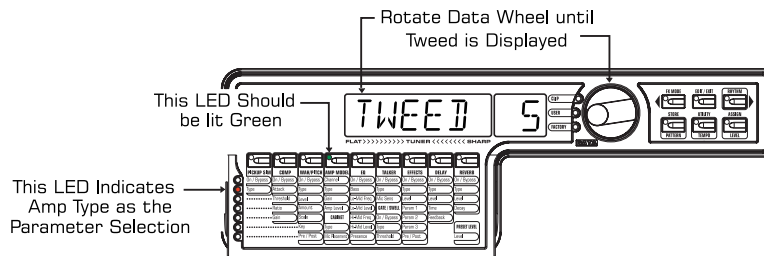
Diagram illustrating the CryoWah control panel interface with annotations:

- Rotate Data Wheel until Cry is Displayed:** Points to the circular data wheel on the right side of the panel.
- Press this Button to Access the Wah:** Points to the **Wah** button located below the digital display.
- This LED Indicates Type as the Parameter Selection:** Points to the row of LEDs on the left side of the panel, corresponding to the parameter selection buttons.

The reason we selected `BYPASS` for the Wah is because the V-Switch will be used to enable the Wah. In our example, we won't have the Wah active all of the time. However, when we need it, we can activate it by pressing down on the toe of the Expression Pedal.

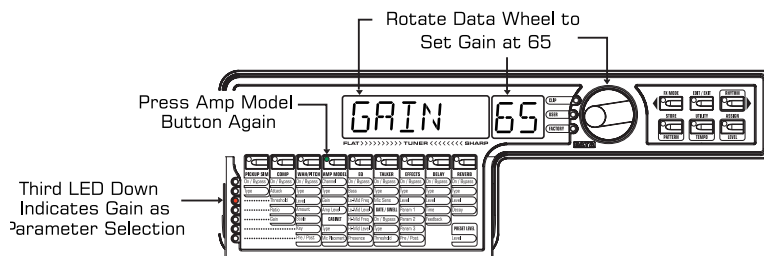
Select the Green Channel Amp Model

We wanted our green channel's Amp Model to produce the sound of a Tweed Amp. Press the Amp Model button and if necessary, rotate the Data Wheel until the Display reads **GREEN**. Press the Amp Model button again which will take us to the Amp Type Parameter for the Green channel. Rotate the Data Wheel until the Display shows **TWEED** as the type.

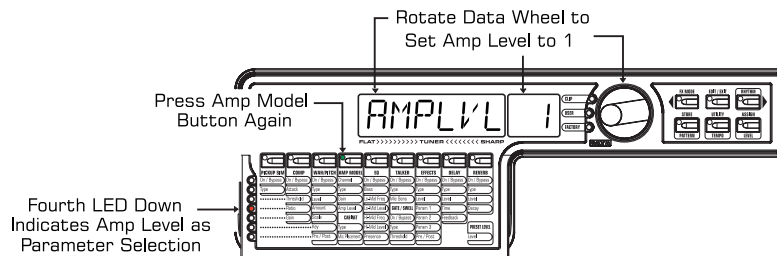


Adjust the Green Channel's Gain, Level, and Cabinet Emulator

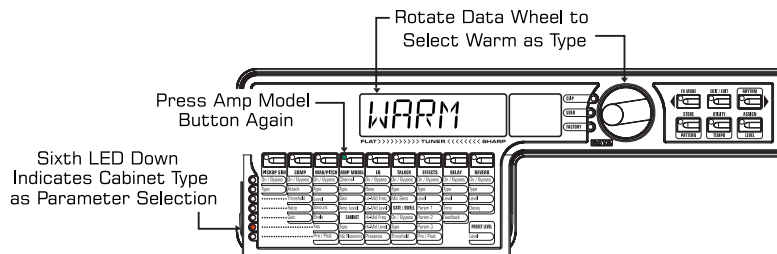
The Gain of the Green channel can be set to provide the drive that we want in our Tweed Amp Model. Press the Amp Model button again and this will take us to the Gain Parameter of the Green channel. Rotate the Data Wheel to set the Gain to 65.



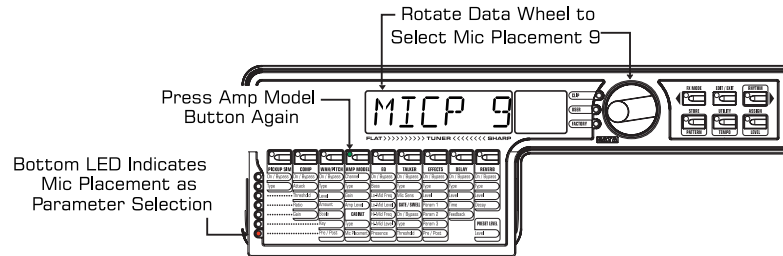
In order to balance the volume Levels of the Green channel's Tweed, and the Red Channel's Rectified Amp Models, we will need to set the Green Channel relatively high to match the volume of the high gain Rectified model. Press the Amp Model button again to access the Amp Level Parameter. Then rotate the Data Wheel to set the Level to about 1.



To help warm up the sound of our Tweed Amp Model, lets select the warm setting for the Cabinet Emulator. Press the Amp Model button again to access the Cabinet Type Parameter. Rotate the Data Wheel until Warm is Displayed.

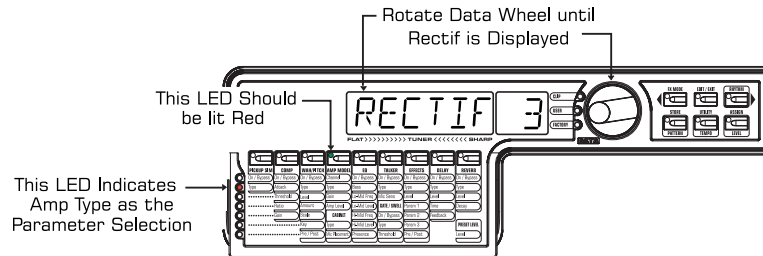


Now to get a full sound out of the Cabinet, we should place the mic close to the center of the speaker. Press the Amp Model button again which will take us to the Mic Placement Parameter. Rotate the Data Wheel until the Display shows *MICP 9*.



Select the Red Channel Amp Model

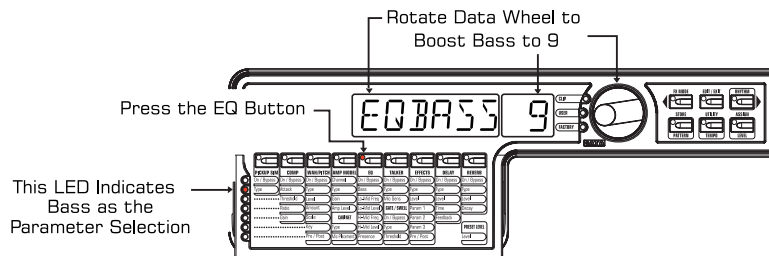
We wanted our red channel's Amp Model to be a heavily distorted Rectified sound. Pressing the Amp Model button again will take us back to the Channel selection. Rotate the Data Wheel to Select *RED*, and the Amp Model LED will turn red. To select a Rectified Amp Model for the Red Channel, press the Amp Model button again and Rotate the Data Wheel until *RECTIF* shows in the Display.



Following the same steps that we used to adjust the Green Channel's Gain, Level, Cabinet, and Mic placement, set the Red Channel's Gain to 99, Level to -1, Dark as the Cabinet Type, and the Mic Placement at 3.

Adjust the EQ

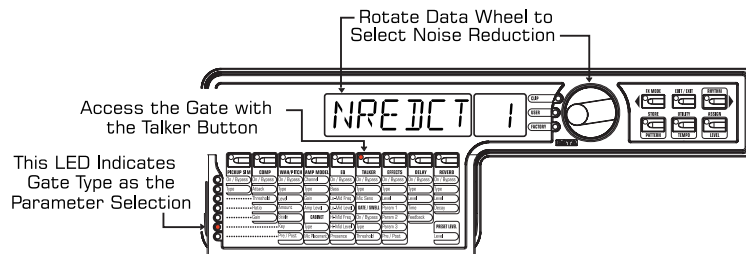
We wanted our Red Channel to have some boosted Bass to give it a deep dark sound. At this point, the LED in the Amp Model button should still be red. Press the EQ button to access the EQ Parameters. The Display will show the current status of the EQ as either *ON* or *BYPASS*. If necessary, rotate the Data Wheel to turn the EQ *ON*. Then press the EQ button again which will take us to the Bass Parameter of the EQ module. Rotate the Data Wheel to set the amount of Bass boost to 9.



We could press the EQ button again to access and adjust the Lo-Mid, Hi-Mid, and Presence Parameters of the EQ, but for the sake of this example, let's assume that we are satisfied with these EQ settings.

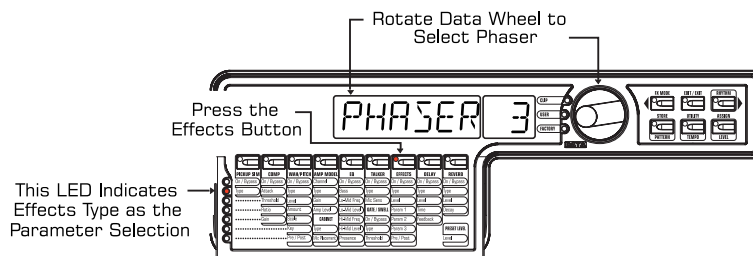
Adjust the Noise Gate

Now we can move on to our Noise Gate Parameters. Press the Talker button which will give us access to the Noise Gate Parameters. Our Example did not call for the use of the Talker effect so if necessary, rotate the Data Wheel to set the Talker to *BYPASS*. Press the Talker button three more times which will take us to the On/Bypass Parameter of the Gate/Swell module. If necessary, rotate the Data Wheel to set the Gate status to *ON*. Press the Talker button again and we will be on the Type Parameter for the Gate. Rotate the Data Wheel to select *NREDCT* as the Gate Type.

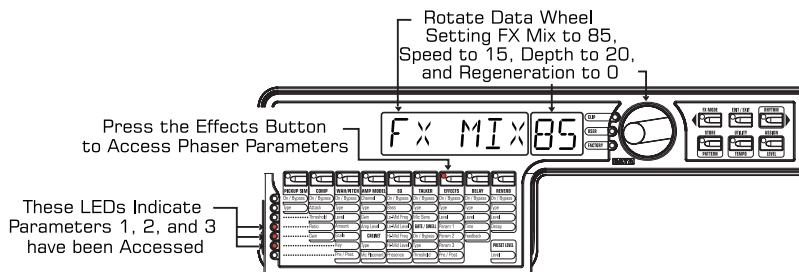


Select the Phaser

Next we wanted a classic Phaser Effect in our custom Preset. Press the Effects button which will select the On/Bypass Parameter of this module. If necessary, rotate the Data Wheel until the Display shows *ON*. Press the Effects button again to access the Type Parameter. Rotate the Data Wheel until *PHASER* is Displayed.



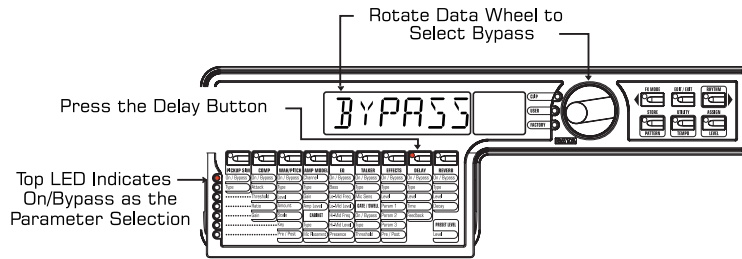
Press the Effects button again to access the Level Parameter of the Phaser. Rotate the Data Wheel to set the Level to about 85. Pressing the Effects button again will access Parameter 1 (*SPEED*). We want a medium setting for the Speed so Use the Data Wheel to set this to 15. To get to the Depth Parameter, press the Effects button again. Then using the Data Wheel set the Depth to about 20. Since we wanted a Classic sounding Phaser we will not want any Regeneration added to the Phaser. Press the Effects button again and make sure that the Regeneration Parameter is set to 0.



The Effects module has the ability to place the selected type of effect either before the Amp Modeling, or in a virtual effects loop of the Amp Model. For this example, let's place the Phaser in the effects loop of the Amp Modeling. Press the Effects button again and the bottom vertical LED lights indicating that you have selected the Pre/Post Parameter. Rotate the Data Wheel until the Display reads *POST* which places the Phaser after the Amp Modeling.

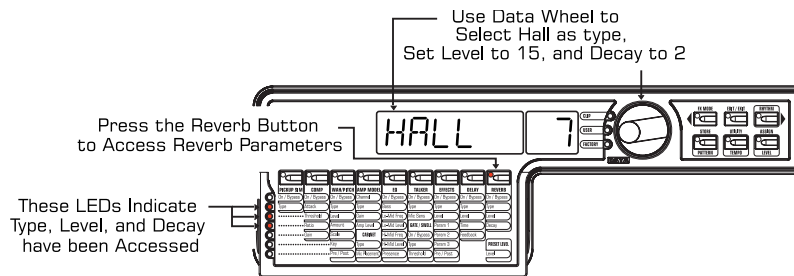
Turn the Delay Off

In our example Preset we wanted the Delay to be bypassed. Press the Delay button and if necessary, rotate the Data Wheel until the Display reads *BYPASS*.



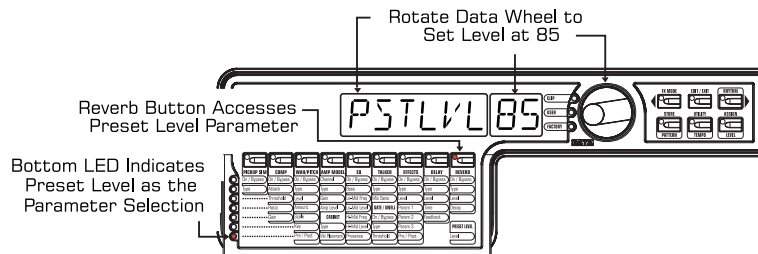
Adjust the Reverb

In our example Preset we also wanted a little bit of Hall Reverb to provide some ambience. Press the Reverb button to access the Reverb's On/Bypass Parameter. If necessary, rotate the Data Wheel to turn the Reverb *ON*. Press the Reverb button again and Rotate the Data Wheel to select Hall as the Reverb Type. Press the Reverb button again to access the Reverb Level Parameter. Set the Level to about 15 by rotating the Data Wheel. Press the Reverb button again and you will be on the Reverb Decay Parameter. Use the Data Wheel to set this to about 2.



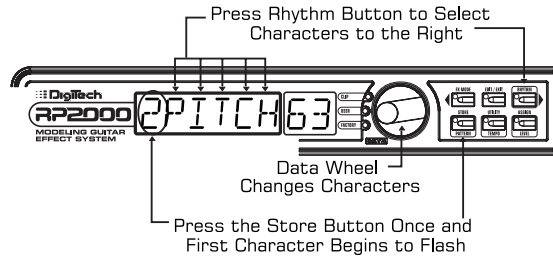
Set the Preset Level

At the bottom of the Reverb column is the Level Parameter for the Preset. Press the Reverb button to access the Preset Level Parameter, and rotate the Data Wheel to set the overall Volume. For our example, let's set this to 85, but you may want to change this to suit your taste.

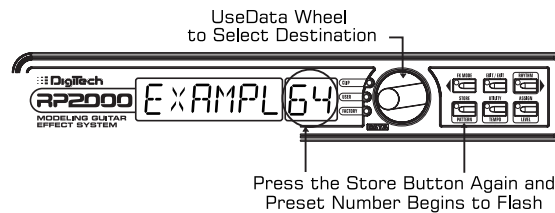


Store the Preset

The last step that we need to do is to store our changes to a User Preset. If we changed Presets or turned the RP2000 off without storing these settings, it would forget what we had done and revert back to the original Preset. Press the Store button once. The first letter in the Display begins to flash which is asking us to rename the Preset. Since this is an example Preset, let's name the Preset *E~~X~~AMPL*. Rotate the Data Wheel until the flashing character in the Display is an *E*. Press the Rhythm button once and the second character begins to flash. Rotate the Data Wheel again until the flashing character is an *X*. Press the Rhythm button again to Select the third character and change it to an *A*. by rotating the Data Wheel. Continue using the rhythm button to select the characters and the Data Wheel to change the characters.



Once *E~~X~~AMPL* is in the Display, press the Store button again. Now the numbers in the red Display are flashing which is asking you where you want to store this new Preset. Rotate the Data Wheel to select 64 as the destination. Press the Store button one more time to execute the Store function.

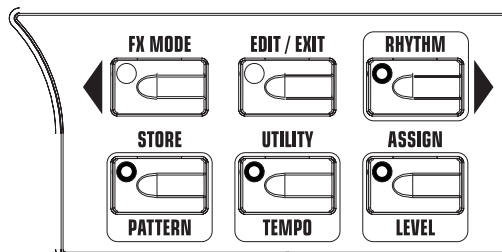


Congratulations! You have successfully created a Preset.

Section Five - Other Functions

Rhythm

The Rhythm mode in the RP2000 is a great tool for improving your timing, rehearsing different musical styles, or just jamming when your drummer is out delivering pizzas. The Rhythm mode plays sampled drum beats in an infinite loop and lets you to select different patterns, change tempo, and adjust the volume level. When the Rhythm mode is activated, the drum samples are mixed with your guitar signal at the left, right, and headphone outputs of the RP2000, and at the Digital Output if the Dry Track feature is off.



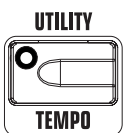
The Rhythm mode is activated by pressing the Rhythm button. At this time, the Rhythm button's LED will light and the current drum pattern will loop continuously. If Rhythm mode is activated from Performance mode, the LEDs in the Store, Utility, and Assign buttons will light indicating that the function of these switches has changed. The Store button is now used to select the drum Pattern, the Utility is used to select the Tempo, and the Assign is used to adjust the Level of the drum loop.

The RP2000's Display will show the currently selected Rhythm function for 5 seconds and allow you to change the Rhythm Pattern, Tempo, or Level when they are selected. If no adjustment is made after 5 seconds, the RP2000 will revert back to the name of the currently selected Preset. Presets can be changed or edited while the Rhythm mode is enabled.



Pattern

Press the Pattern (Store) button once. The currently selected drum pattern will be shown in the Display. Rotate the Data Wheel to select the Pattern. There are 30 different Patterns available.



Tempo

Press the Tempo (Utility) button once. The display shows the current tempo in beats per minute (BPM). Rotate the Data Wheel to change the tempo of the selected Pattern. Tempo ranges from 60 BPM (60 beats per minute) to 240 BPM (248 beats per minute).



Level

Press the Level (Assign) button once. The display reads LEVEL. Rotate the Data Wheel to select the playback volume of the drum loop. Level ranges from 1 to 50.

Assign

The Assign button is used to assign Parameters to the Expression Pedal, the Control Footswitch, or two internal LFOs (Low Frequency Oscillator). Individual minimum and maximum values can be programmed for each of these controllers, and the LFOs include programmable frequency (speed), and waveforms. Assigning Parameters to these controllers is a very simple and intuitive process. Simply press the Assign button once and the Display will briefly show ASSIGN, after which it will alternate between showing EXPDL and the current assignment for the Expression Pedal.

Use the Rhythm button to scroll to the right, or the FX Mode button to scroll to the left through the minimum and maximum value menus, and to reach the Control Switch and LFO menus.

Note:The Rhythm mode must be disabled to access the Assign menus.

Expression Pedal

The Expression Pedal offers real time control over a variety of Parameters, and lets you vary the value of the Parameter with your foot. To assign a Parameter to the Expression Pedal:

1. Press the Assign button once. The Display briefly shows *ASSIGN*, and then alternates between showing *EXPDL=* and the currently assigned Parameter.
2. Rotate the Data Wheel or press the Matrix buttons until the display shows the Parameter you wish to control.
3. Press the Rhythm button once. The Display alternates between *EXPMIN* (Expression Pedal minimum) and the currently assigned minimum value for the selected Parameter.
4. Rotate the Data Wheel to select the minimum value you want the assigned parameter to reach in the toe up position of the Expression Pedal.
5. Press the Rhythm button again. The Display alternates between *EXPMAX* (Expression Pedal maximum) and the currently assigned maximum value for the selected Parameter.
6. Rotate the Data Wheel to select the maximum value you want the assigned parameter to reach in the toe down position of the Expression Pedal.
7. Store your assignments to your Preset.

Control Switch

The Control Pedal can instantly change the value of a Parameter to a different pre-determined value. This is useful for a variety of purposes. For instance: you can instantly change from one delay time to another, suddenly change from a very small amount of flanging to a lot, or turn an effect on and off. You can also assign the Control Pedal to start and stop the Rhythm mode. The Control Footswitch includes the option of operating as toggle (meaning that once pressed, the assigned Parameter value changes until the Control Footswitch is pressed again), or momentary (meaning that the value of the assigned Parameter will only change for as long as you hold the switch down). To assign a Parameter to the Control Footswitch:

1. Press the Assign button once. The Display briefly shows *ASSIGN*, and then alternates between showing *EXPDL=* and the currently assigned Parameter for the Expression Pedal.
2. Step to the right by pressing the Rhythm button 3 times. The Display alternates between showing *ENTFS=*, and the Parameter currently assigned to the Control Footswitch.
3. Rotate the Data Wheel or use the Matrix buttons until the display shows the Parameter you wish to assign to the Control Footswitch.
4. Press the Rhythm button once. The Display alternates between *CFSMIN* (Control Footswitch minimum) and the currently assigned minimum value for the selected Parameter.
5. Rotate the Data Wheel to select the minimum value you want the assigned parameter to reach when the LED in the Control Footswitch is off.
6. Press the Rhythm button again. The Display alternates between *CFSMAX* (Control Footswitch maximum) and the currently assigned maximum value for the selected Parameter.
7. Rotate the Data Wheel to select the maximum value you want the assigned parameter to reach when the LED in the Control Footswitch is on.
8. Press the Rhythm button again. The Display alternates between *CFSTYP* (Control Footswitch Type) and the currently assigned momentary, or toggle status.
9. Rotate the Data Wheel to select the type of operation you wish to use for the Control Footswitch.
10. Store your assignments to your Preset.

Note:All assignments to the Control Switch are local. There is no way of making a global assignment to this switch.

LFO 1 and LFO 2

The LFOs in the RP2000 are filters that sweep back and forth between two points at an even rate. The speed that the LFOs cycle back and forth is programmable, and there are 5 selectable wave forms for the LFOs. The waveform controls the abruptness of change between the minimum and maximum values. These LFOs can be assigned to Parameters and as the LFO sweeps back and forth, the assigned Parameter will continuously change values at an even rate. For instance, if the Gain were assigned to an LFO, the guitar signal would automatically fade from a clean tone to a distorted tone, and then back to a clean tone as the LFO cycled through its wave form. The LFO speed would determine the length of time it took the signal to fade from clean to distorted and back to clean, and the wave form would determine whether the change was smooth and gradual, or sudden and abrupt. To assign a Parameter to an LFO:

1. Press the Assign button once. The Display briefly shows *ASSIGN*, and then alternates between showing *EXPDL* and the currently assigned Parameter for the Expression Pedal.
2. Press the Rhythm button 7 times to reach LFO 1, or 12 times to reach LFO 2. The Display alternates between showing *LFO1* (or *LFO2*) and the Parameter currently assigned to the LFO.
3. Rotate the Data Wheel or use the Matrix buttons until the display shows the Parameter you wish to be controlled by the LFO
4. Press the Rhythm button once. The Display alternates between *LFIMIN* (LFO 1 or 2 minimum) and the currently assigned minimum value for the selected Parameter.
5. Rotate the Data Wheel to select the minimum value you want the assigned parameter to reach when the LFO reaches the bottom of the sweep.
6. Press the Rhythm button again. The Display alternates between *LFIMAX* (LFO 1 or 2 maximum) and the currently assigned maximum value for the selected Parameter.
7. Rotate the Data Wheel to select the maximum value you want the assigned parameter to reach when the LFO reaches the top of the sweep.
8. Press the Rhythm button again. The Display alternates between *LFIFREQ* (LFO 1 or 2 Frequency) and the currently assigned Frequency (speed) value.
9. Rotate the Data Wheel to select the rate that the LFO will change the assigned Parameter.
10. Press the Rhythm button again. The display alternates between *LF1WAV* (LFO 1 or 2 Waveform) and the currently selected waveform for the LFO.
11. Rotate the Data Wheel to select the desired waveform. Your choices include: *SINE* (sine), *TRINGL* (triangle), *LOG* (logarithmic), *EXPNTL* (exponential), and *SQUARE* (square).
12. Store your assignments to your Preset.

Utilities

The Utility section contains all of the menus for assigning global functions to the RP2000. Global functions affect the RP2000 as a whole rather than on a per Preset basis. The Utility menus include: Mono/Stereo Output, Global Cabinet Modeling, V-Switch Sensitivity, Volume Pedal Update, Dry Track, Bank Naming, MIDI Channel, MIDI Sysex Dumps, MIDI Mapping, MIDI Merge, Pedal Calibration, and Factory Reset. Once in the Utility menu, the Rhythm button scrolls to the right, and the FX Mode button scrolls to the left through the menus.

Mono/Stereo Output

The RP2000 needs to be told whether you wish to use it in a stereo or mono mode. In Stereo mode, the RP2000 will produce a wide stereo image when the Right and Left Outputs are connected to two different amplifiers. In Mono mode, the same signal will appear at the Left and Right Outputs. To select the Stereo or Mono mode, press the Utility button and scroll to the left or right until the Display shows either *STEREO*, or *MONO*. Rotating the Data Wheel will change the output mode.

Global Cabinet Modeling

The Cabinet Modeling in the RP2000 can be enabled globally in every Preset. This can save time when your application requires the use of the Cabinet Modeling on all Presets. To access the Global Cabinet Modeling, press the Utility button and scroll to the left or right until the display shows `CABLOC` (Cabinet Local), or `CABGLB` (Cabinet Global). When set to Global, all Presets will have the Cabinet Modeling enabled, regardless of whether it was programmed into a Preset or not. When set to Local, the Cabinet Modeling will only be enabled on Presets which were programmed with it on. Presets using Acoustic Models are not affected by the Global Cabinet Modeling.

V-Switch Sensitivity

Applying extra pressure on the toe of the Expression Pedal engages a feature we call the V-Switch. The V-Switch is used to enable or disable the effect selected in the Wah/Pitch module. The sensitivity of the V-Switch can be tailored to engage with the amount of pressure you wish to use. To adjust the V-Switch sensitivity, press the Utility button and scroll to the left or right until the Display shows `V SWCH`. Rotate the Data Wheel to select the sensitivity you desire. Ranges from 1 to 99 (with 99 requiring more pressure to engage).

Volume Pedal Update

The RP2000 provides the option of selecting the Expression Pedal's position to be updated after changing Presets when it is linked to the Volume Parameter. This feature allows you to change Presets and retain the same volume level from the previous Preset if the Expression Pedal is assigned to control volume on both Presets. If this feature is disabled, new Presets will load with the volume Parameter initializing at the Level value stored to the Preset. To enable or disable this feature, press the Utility button and scroll to the left or right until the Display shows `VOLUPD`. Rotate the Data Wheel to select `ON` (enabled), or `OFF` (disabled).

Dry Track

The Dry Track option is used to select whether the Digital Output taps the signal before or after the Effects, Delay, and Reverb modules. With Dry Track enabled, the signal delivered to the Digital Output signal includes processing from the Pickup Modeling module through the Noise Gate module. With the Dry Track disabled, the Digital Output signal includes all processing. This is useful for recording dry guitar tracks with the intent of adding processing after the guitar tracks have been recorded. All effects can be monitored through the left, right, and headphone outputs even when Dry Track is enabled. To access the Dry Track option:

1. Press the Utility button and scroll to the left or right until the Display shows `DRYTRK`.
2. Rotate the Data Wheel to select `ON` (enabled) or `OFF` (disabled) in the red Display.

Note: If either the Wah Pitch or Effects modules are configured to be “Pre” Amp Modeling, these effects will be heard at the Digital Output when Dry Track is enabled.

Bank Names

The RP2000 provides the ability to customize the names of each of the 16 User Banks where the 64 User Presets reside. Customized Bank names aid in quickly identifying the User Bank containing the Presets you may need for a particular song. The procedure for naming the User Banks is as follows:

1. Press the Utility button and scroll to the left or right until the Display shows the name of User Bank 1. From the factory this bank is named `SHOCCAS`.
2. Rotate the Data Wheel to select the User Bank you wish to rename.
3. Press the Store button once which takes you into the naming menu. The far left letter of the Bank name begins to blink.
4. Rotate the Data Wheel to change the character of the blinking letter.
5. Press the Rhythm button to select characters to the right, or the FX Mode button to select characters to the left. Rotating the Data Wheel will change the alphabetic character.
6. Once the desired Bank name is showing in the Display, press the Store button again. The Display will briefly show `NAMSV` indicating that the Bank name has been saved, and then return to the new Bank name.

MIDI Channel

The RP2000's MIDI channel is used for receiving incoming MIDI data only. The MIDI channel is access by pressing the Utility button and scrolling to the left or the right until *MIDICH* is shown in the Display. Rotate the Data Wheel to select the desired MIDI channel the RP2000 will respond to. The MIDI channel will be shown in the red Display. Choices include 1 through 16, *ALL* (all), and *OFF* (off).

Bulk Dump

The Sysex Bulk Dump menu allows up loading of all the RP2000's Presets and Utility data to a sysex librarian, or MIDI recording device. This is useful for making a backup copy of all your customized settings. The procedure for performing a Bulk Dump is as follows:

1. Connect a MIDI cable from the RP2000's MIDI Out to the the MIDI In of a MIDI recording device.
2. Press the Utility button and scroll to the left or the right until *BLK DMP* is shown in the Display.
3. Set the MIDI recording device to record.
4. Rotate the Data Wheel to begin the dump. The Display reads *DUMPING* until the dump is complete at which time the Display will return to the *BLK DMP* menu.

The Bulk Dump will send information on the MIDI channel defined in the MIDI Channel menu.

MIDI Preset Dump

The Sysex Preset Dump menu allows up loading of just the RP2000's Presets to a sysex librarian, or MIDI recording device. This is useful for making a backup copy of your customized Presets, or loading your Presets into another RP2000. The procedure for performing a Bulk Dump is as follows:

1. Connect a MIDI cable from the RP2000's MIDI Out to the the MIDI In of a MIDI recording device.
2. Press the Utility button and scroll to the left or the right until *U1 DMP* is shown in the Display.
3. With the number between *U* and *DMP* blinking, rotate the Data Wheel to select the User Preset number you wish to dump.
4. Press the Rhythm button once. Two dashes -- in the red display begin to blink.
5. Set the MIDI recording device to record.
6. Rotate the Data Wheel to begin the dump. The Display reads *DUMPING* until the dump is complete at which time the Display will return to the *U1 DMP* menu.

The Preset Dump will send information on the MIDI channel defined in the MIDI Channel menu.

MIDI Mapping

The MIDI Mapping in the RP2000 allows any of the Factory, or User Preset to be accessed from external MIDI program changes which may not necessarily correspond to the desired RP2000 Preset. This is useful when multiple MIDI devices are chained together and are all controlled by one central unit. For example, the main MIDI controller can send out a program change command telling a particular MIDI unit to change to Program 10, but you may want the RP2000 to change to User Preset 27. You can remap the RP2000 so when it receives MIDI Program change 10, it calls up User Preset 27. The Procedure for mapping MIDI program changes is as follows:

1. Press the Utility button and scroll to the left or right until the display shows *M 10 U 1* (this is saying that MIDI program 1 will access the RP2000's User Preset 1). The *M 10* will be blinking (this is the incoming program number).
2. Rotate the Data Wheel to select the desired incoming program number.
- 3 Press the Rhythm button once and *U 1* begins to blink (this is the RP2000's internal Preset).
4. Rotate the Data Wheel to select the desired Factory or User Preset which will be recalled when the selected MIDI program number (to the left) is received.

MIDI Merge

The MIDI Merge function is used to enable or disable the transmission of incoming MIDI data to the MIDI Out port. This is useful when multiple MIDI devices are chained together, and you wish to pass the incoming MIDI Data on to MIDI devices downstream from the RP2000. To access the MIDI Merge function, press the Utility button once and scroll to the left or right until the Display shows *MERGE*. Rotate the Data Wheel to select either *ON* or *OFF*.

Expression Pedal Calibration

The Expression Pedal on the RP2000 needs to be recalibrated for use after a factory reset has been performed. This calibration procedure is automatically entered after a factory reset procedure. In the event the Pedal's calibration fails, or if the Pedal does not function properly, it can be re-calibrated using the Pedal Calibration menu. The procedure for Calibrating the Expression Pedal is as follows:

1. Press the Utility button and scroll to the left or right until the Display shows *PEDCAL*.
2. Rotate the Data Wheel. The Display shows *TOE UP*.
3. Rock the pedal forward to the toe up position.
4. Press the blinking number 2 Footswitch and the Display now shows *TOE DN*.
5. Rock the Pedal back to the toe down position.
6. Press the blinking number 3 Footswitch and the Display will return to the *PEDCAL* screen.

Note: If the Display shows error, an error has occurred and steps 2 through 6 should be repeated.

Factory Reset

This function resets the RP2000 to its original factory settings. This procedure will erase all custom user Presets, Utility settings, and recalibrate the Expression Pedal.

ATTENTION: *Performing this function will erase all user-programmed data. All such data will be lost forever!
Be sure you want to erase the memory and start fresh before continuing with this procedure.*

The procedure for performing a Factory Reset is as follows:

1. Press the Utility button once and scroll to the left or right until the Display shows *FCTRST*.
2. Rotate the Data Wheel one notch. The Display reads *NO YES*.
3. This is your last chance to change your mind. Rotating the Data Wheel while the no is blinking in the Display will abort the Reset procedure.
4. If you are sure that you want to reset all user settings, press the Rhythm button once to make the word yes begin blinking in the display. Rotating the Data Wheel will reset the RP2000. The display will briefly show *RESET* and take you to the Pedal Calibration menu. See the section above for more information on Pedal Calibration.

Section Six - Appendix

Preset List

Bank 1 - Showcase (SHOWCAS)

1. DaSolo
2. Clasic
3. Rhythm
4. AYah

Bank 2 - Stars (STARS)

5. Eric J
6. SRV
7. Vaiish
8. Limpy

Bank 3 - Amps 1 (AMPS 1)

9. Tweedy
10. Matchd
11. VoxVib
12. Stacks

Bank 4 - Modern (MODERN)

13. ElAcou
14. Phasin
15. Triplt
16. Revers

Bank 5 - Rock (ROCK)

17. Rockin
18. DrtFlg
19. Ballad
20. HGLead

Bank 6 - Funk (FUNK)

21. ClnFnk
22. Mo Wah
23. Be Bad
24. EFilter

Bank 7 - Blues (BLUES)

25. TwdBlu
26. Muddy
27. Slider
28. TexBlu

Bank 8 - Country (ENTRY)

29. Slappy
30. Drive
31. PdIStl
32. A>DMix

Bank 9 - Metal (METAL)

33. Scoop
34. OctSub
35. Whamit
36. Talker (Use Mic)

Bank 10 - Amps 2 (AMPS 2)

37. MKBoog
38. ClnTub
39. Recto
40. HiGain

Bank 11 - Studio (STUDIO)

41. StuCln
42. Crunch
43. Swell
44. StSolo

Bank 12 - Vintage (VINTAG)

45. Stones
46. Foxy
47. ESitar
48. Surfo

Bank 13 - Jazz (JAZZ)

49. Jazz
50. Fusion
51. NewAge
52. Rotary

Bank 14 - Clean (CLEAN)

53. CmpCln
54. ClnDly
55. I2Stng
56. ClnCho

Bank 15 - Expression (XPRESN)

57. WhamDn
58. GasMic
59. PchRev
60. EZ Wah

Bank 16 - Special Effects (SPELFX)

61. Phased
62. Loopin
63. 2Pitch
64. Aliens

MIDI CC List

Parameter	CC Number	Parameter	CC Number
Pickup On/Bypass	CC 1	Talker On/Bypass	CC 29
Type	CC 2	Type	CC 30
Comp. On/Bypass	CC 3	Mic Sensitivity	CC 31
Attack	CC 4	Gate/Swell On/Bypass	CC 32
Threshold	CC 5	Type	CC 33
Ratio	CC 6	Threshold	CC 34
Gain	CC 8	Effects On/Bypass	CC 35
Wah/Pitch On/Bypass	CC 9	Type	CC 36
Type	CC 10	Level	CC 37
Level	CC 11	Param 1	CC 38
Amount	CC 12	Param 2	CC 39
Scale	CC 13	Param 3	CC 40
Key	CC 14	Pre/Post	CC 41
Pre/Post	CC 15	Delay On/Bypass	CC 42
Amp Model		Type	CC 43
Model Channel	CC 16	Level	CC 44
Green Channel		Time	CC 45
Type	CC 17	Feedback	CC 46
Gain	CC 18	Reverb On/Bypass	CC 47
Amp Level	CC 19	Type	CC 48
Cabinet Type	CC 20	Level	CC 49
Mic Position	CC 21	Decay	CC 50
EQ On/Bypass	CC 22	Preset Level	CC 7
Bass	CC 23	Pre Level	CC 51
Low Mid Freq.	CC 24	Post Level	CC 52
Low Mid Level	CC 25	Whammy	CC 53
High Mid Freq.	CC 26	Drum On/Off	CC 54
High Mid Level	CC 27	Tempo	CC 55
Presence	CC 28	Pattern	CC 56
Red Channel		Level	CC 57
Type	CC 61		
Gain	CC 62		
Amp Level	CC 63		
Cabinet Type	CC 64		
Mic Position	CC 65		
EQ On/Bypass	CC 66		
Bass	CC 67		
Low Mid Freq.	CC 68		
Low Mid Level	CC 69		
High Mid Freq.	CC 70		
High Mid Level	CC 71		
Presence	CC 72		

Section Six - Appendix

MIDI Implementation

Function	Transmitted	Received	Remarks
MIDI Channel	1-16	1-16	
Mode	X	2, 4	
Note Number	X	X	
Velocity	X	X	
Aftertouch	X	X	
Pitchbend	X	X	
Control Change	X	0-127	See MIDI CC List
Program Change	X	1-128	
System Exclusive	O	O	
System Common			
Song Position:	X	X	
Song Select:	X	X	
Tune:	X	X	
System Real Time			
Clock:	X	X	
Commands:	X	X	
Aux Messages	X	X	

Mode 2 : Omni On, Mono

Mode 4 : Omni Off, Mono

O : Yes

X : No

Specifications

A/D Converter: 24 bit
D/A Converter: 24 bit
Sampling Frequency: 44.1 kHz

DSP Section:

Dual DSP architecture with true 24-Bit stereo processing @ 128 Million Instructions Per Second (MIPS)

Connections:

Guitar Input and Outputs: 1/4" TS
Microphone: Balanced XLR with hard wire relay bypass to XLR output.
Jam-A-Long/Learn-A-Lick: 1/8" Stereo TRS
Headphone: 1/4" Stereo TRS
MIDI: In and Out/Thru
Digital Output: S/PDIF format with RCA Connector

General:

Frequency Response: 20 Hz. – 20 kHz. +0, -3 dB
S/N ratio: Greater than 95 dB; ref = max signal, 22kHz measurement bandwidth.
Total Harmonic Distortion: Less than 0.04% (1kHz).
Memory Capacity: Factory: 64 Presets User: 64 Presets in battery-backed RAM

Power Requirements:

US and Canada:	120 VAC, 60 Hz	Adapter: PS0920
Japan:	100 VAC, 50/60 Hz	Adapter: PS0920-100
Europe:	230 VAC, 50 Hz	Adapter: PS0920CE-230
UK:	240 VAC, 50 Hz	Adapter: PS0920-240B

Power Consumption: 12 watts
Dimensions: Length 17.25" Width 8.5" Height 3"
Unit Weight: 7.1 lbs.
Shipping Weight: 9 lbs.

RP2000

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