DigiTech

RP-1

Guitar Effects
Processor/Controller
and Preamp

Owner's Manual

H A Harman International Company

Table of Contents (cont'd)

Quick Start

For those of you who want to play now and read later, we've included this Quick Start reference sheet to help you do it right the first time.

Connect Cables: Connect audio input and output cables to the rear jacks. Either balanced (tip-ring-sleeve) or unbalanced (tip-sleeve) cables may be used. The rear headphone jack permits you to use the RP-1 without an amplifier.

Apply Power: Route the power cord away from audio lines to prevent interference.

Adjust Input: Set the instrument to the loudest operating level that will be used. Make sure your amp is set for a clean sound, that your tone controls are all neutral (flat), and that the main volume is all the way down. Begin playing and adjust the RP-1 input level until the red headroom LED comes on occasionally.

Adjust Output: Set the RP-1 output level to the 12 o'clock position and turn up the amplifier to the desired volume.

Effects Loop: Connect any external effects devices to the RP-1 effects send and return jacks. NOTE: External devices should return the same signal level *to* the RP-1 as they receive *from* the RP-1 in order to avoid level changes when switching the effects loop in and out. This signal level relationship is called *unity gain*.

Connect MIDI Controller: Plug in a MIDI controller, sequencer, or synthesizer to the MIDI In jack, if desired.

Select Speaker Simulator: To obtain the best possible sound, you may need to select a Speaker Simulator program to match your guitar system. Press the <UTILITY> key once (the <UTILITY> key is the button farthest to the right on the control panel of the RP-1). Using the <UP> Parameter button, select one of the first four Speaker Simulator programs, according to the type of setup you are using. For now, ignore U1-U5 Speaker Simulator programs. Here is a description of each of the first four Speaker Simulator programs and their uses:

- **Simulator 1 Gtr Pwr Amp & Cab -** This is the program to choose if you use extension guitar cabinets with a power amp designed for guitar.

- **Simulator 2 Ref Pwr Amp & Cab -** If you are using a reference power amp (such as a power amp designed for studio control rooms) with extension cabinets, use this program.

- **Simulator 3 Combo Amp w/10"< -** This program is optimized for use with combo amps containing 10 inch or smaller speakers.

- **Simulator 4 Combo Amp w/12"> -** This program is optimized for use with combo amps containing 12 inch or larger speakers.

After you've selected a suitable Speaker Simulator program, press the <UTILITY> button again.

Select Program: Begin playing your guitar and choose any program using the <UP>/<DOWN> Program buttons. Presets 1-75 are user-programmable, and you can modify and store them as you want. Presets 76-150 are duplicates of the first 75, but these are stored permanently at the factory, in case you want to go back to them. Programs 76-150 cannot be overwritten.

WELCOME!

Congratulations, and thank you for your purchase of the RP-1 multi-effects processor / MIDI foot controller. DigiTech has built a reputation for making professional quality rack effects affordable, and the RP-1 is no exception. This time, however, we've managed to pack the power of a rack unit into a convenient floor controller, with all the hot features that you've come to expect from DigiTech.

From its inception, the RP-1 has been designed to be the most powerful and convenient single package unit available for guitar. Features include:

- 24 effects, up to 9 at a time.

- Advanced Speaker Simulator.

- Full MIDI input and output mapping.

- Fully programmable local and global continuous controller assignments.

- Programmable effects loop for outboard gear.

- Stereo headphone output.

- Infinite repeat.

It doesn't occupy any of your valuable rack space, and the optional gig bag makes transportation of the unit worry-free. The RP-1 can also be used as a remote MIDI foot controller for all of your MIDI-controllable devices. With the RP-1, you can do it on the floor!

About This User's Manual

There are four basic operating modes available on the RP-1: Performance Mode, Edit Mode, Title, and Utility. This manual will guide you through all of them Please read it carefully. After you get through the initial excitement stages, spend some real experimentation time with the unit. This will allow you to familiarize yourself with the tremendous number of possibilities open to you for sonic creation. Good luck, and thank you again for choosing DigiTech.

The symbols shown above are internationally accepted symbols that warn of potential hazards with electrical products. The lightning flash with arrowpoint in an equilateral triangle means that there are dangerous voltages present within the unit. The exclamation point in an equilateral triangle indicates that it is necessary for the user to refer to the owner's 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 RP-1 wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service. Disconnect the equipment during storms to prevent damage.

Section 1 - Startup

Power and Grounding Information

Line Conditioning - The RP-1, like any piece of computer hardware, is sensitive to voltage drops, spikes, and surges. Interference such as lightning or power "brownouts" can seriously, and in extreme cases, permanently damage the circuitry inside the unit. Here are some steps to help avoid this type of damage:

- Spike/Surge Suppressors - This is an inexpensive solution to all but the severest of AC line conditions. Surge protected power strips usually cost only slightly more than unprotected strips, making them a worthy investment for protection of all your valuable gear.

- AC Line Conditioners - This is the best way to go for total protection from improper line voltages, albeit the more expensive way. Line conditioners constantly monitor for excessively high or low voltages and adjust accordingly, thus delivering consistent power levels.

Rear Panel Connections
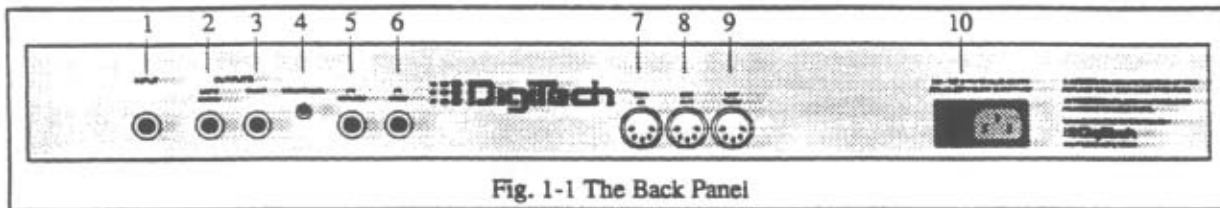
Fig. 1-1 The Back Panel

1) **Input** - This is the instrument input jack.

2) **Left/Mono Output** - This is the left side output. For mono applications, use this output jack for best performance.

3) **Right Output** - The right side output for stereo setups.

4) **Headphone Output** - Stereo mini-plug for headphone monitoring.

5) **FX Return** - This is the effects loop return jack. Connect to the output of an external effects device.

6) **FX Send** - This is the effects loop send jack. Connect to the input of an external effects device.

7) **MIDI In** - Receives information from other MIDI instruments (synthesizers, MIDI sequencers, computers, etc.).

8) **MIDI Out** - Sends out MIDI data generated by the RP-1 to other MIDI instruments.

9) **MIDI Thru** - Any MIDI data detected at the MIDI In port is sent directly through the unit and back out the MIDI Thru. The only data that the RP-1 recognizes is data that appears on the RP-1's selected MIDI channel (see Pg. 18 to set RP-1 MIDI channel).

10) **AC Line Input** - This is the power cord receptacle.

MIDI and Audio Routing Setups

Following are several diagrams showing possible MIDI and Audio routing setups using the RP-1.

Fig. 1-2 The RP-1 in a basic setup

Fig. 1-3 Using the RP-1 with outboard effects

Fig. 1-4 Using the RP-1 as a multi-effects controller
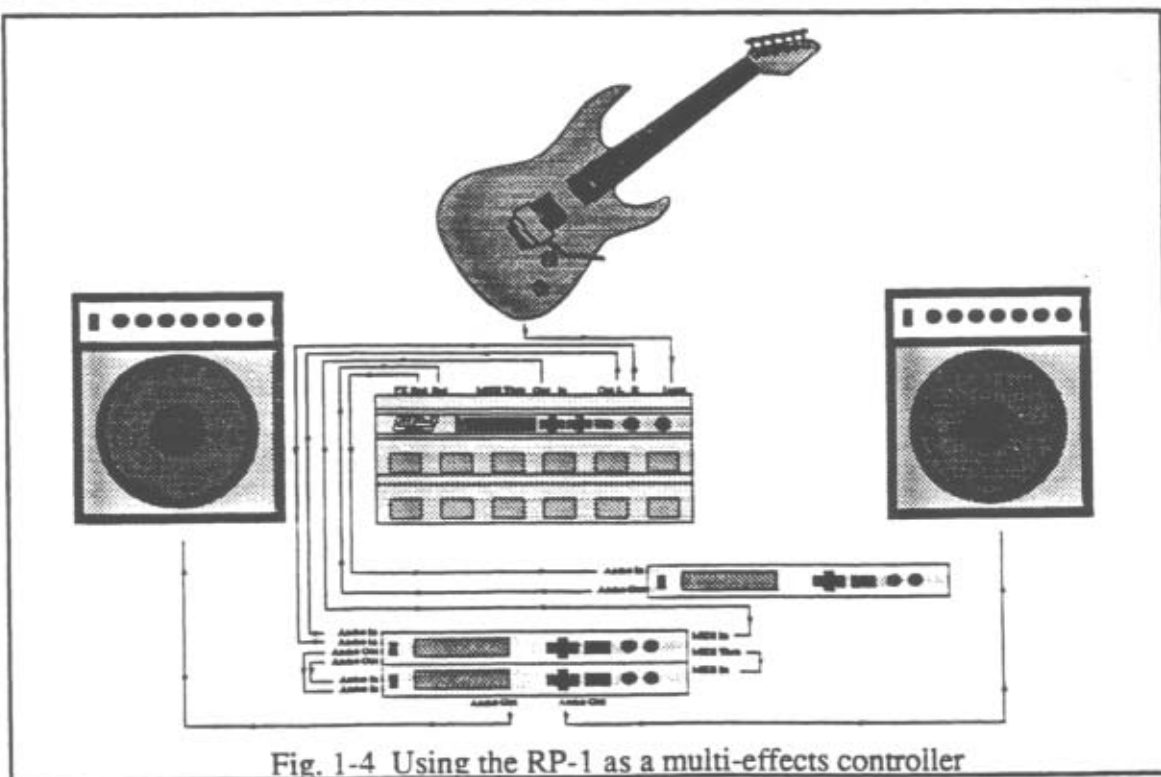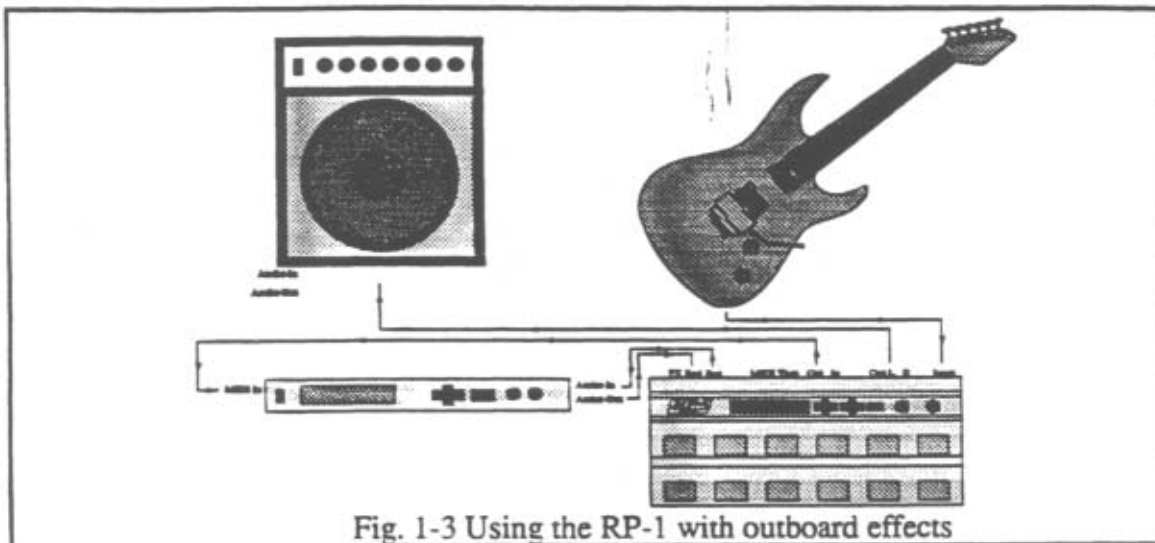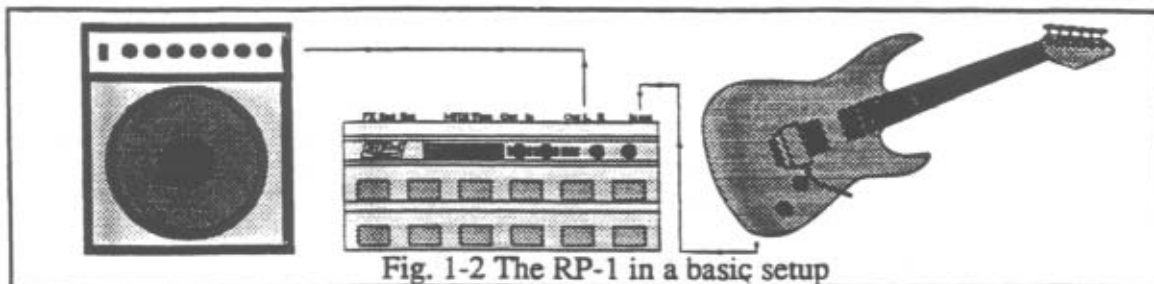
<u>Section 2 - Basic Operations</u>

The Foot Controller
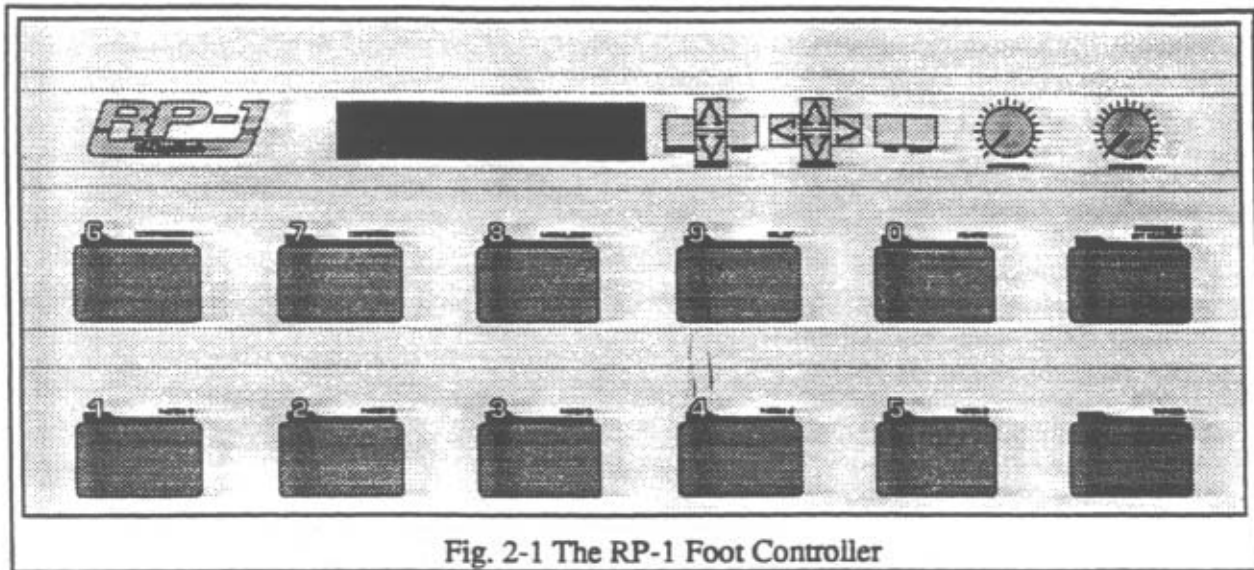
Fig. 2-1 The RP-1 Foot Controller

The RP-1's front panel consists of 12 footswitches, a high-visibility display, input and output level controls, and the control panel buttons (Program <UP>/<DOWN>, <COMPARE>, <STORE>, Parameter <UP>/<DOWN>/<LEFT>/<RIGHT>, <TITLE>, <UTILITY>). Switches are numbered 0-9, and can be set to operate in one of two modes: 5 Patch and 10 Patch (more about these modes on pg. 8).

The functions of the main control panel buttons are as follows:

- The Program <UP>/<DOWN> buttons allow you to scroll numerically through the available Programs.

- The <COMPARE> button allows you to compare the modified sound with the original.

- The <STORE> button allows you to store a selected Program into any memory location for later recall.

- The Parameter <LEFT>/<RIGHT> buttons allow you to scroll to the parameter you want to edit.

- The Parameter <UP>/<DOWN> buttons allow you to change the value of the displayed parameter.

- The <TITLE> button allows you to give your Programs custom names (up to 16 characters in length).

- The Utility Menu is accessed using the <UTILITY> button. The Utility Menu includes the Speaker Simulator menu, the MIDI Setup Menu, the RP-1 Footswitch Setup Menu, and the Factory Preset Restore Menu (see pg. 23).

About Modes and Menus

It is perhaps easiest to think of the RP-1's menu architecture as a series of levels. As in a restaurant, a menu is nothing more than a listing of options available to you.

At the topmost level is Performance Mode. Performance Mode is the vehicle by which all Programs, Patches and Sets on the RP-1 are accessed. In other words, Performance Mode is the main operations mode.

To change the currently selected Program, press the <UP> or <DOWN> program buttons while in Performance Mode (Performance Mode is the default mode to which the RP-1 is set upon powering up). The Programs are automatically recalled as you select them.

When you press the <RIGHT> or <LEFT> parameter buttons from Performance Mode, you will enter the Edit Mode for the currently selected Program. Continue pressing the <LEFT> or <RIGHT> parameter buttons, and you will move through the available parameter options. Moving through the menus of the RP-1 in this manner is called "scrolling". Use the <UP> and <DOWN> parameter buttons to change the value of the parameter. For more in-depth coverage of sound editing and creation, see Section 3 - Programming the RP-1 (pg. 10).

The editing procedure for each Program is essentially the same for all Programs. The only differences are in the available parameters and their values for the various algorithms.

Fig. 2-2 The RP-1 Menu Architecture

5 and 10 Patch Modes

5 Patch mode performs two main functions: Program/Patch switching and effects enable/disable. Programs assigned to Patch footswitches of the selected Set can be accessed using the bottom row of switches (1-5), while the top row (6-0) are assigned to control individual effects in the chain.

In 10 Patch Mode, all ten switches to act as Patch select switches. The switch mode is controlled from the RP-1 FOOTSWITCH SETUP Menu of Utility (see pg. 22). The functions of the switches are as follows:

In 5 Patch Mode:

• Switches 1 - 5 act as Patch select switches. These can also be individually assigned to turn effects on or off within the RP-1, or on external devices. Switches 6 - 0 act as individual effects on/off switches for RP-1 effects or for external devices.

In 10 Patch Mode:
• Switches 0 - 9 act as Patch select switches, or they can be assigned to turn individual effects on or off within the RP-1, or on external devices.
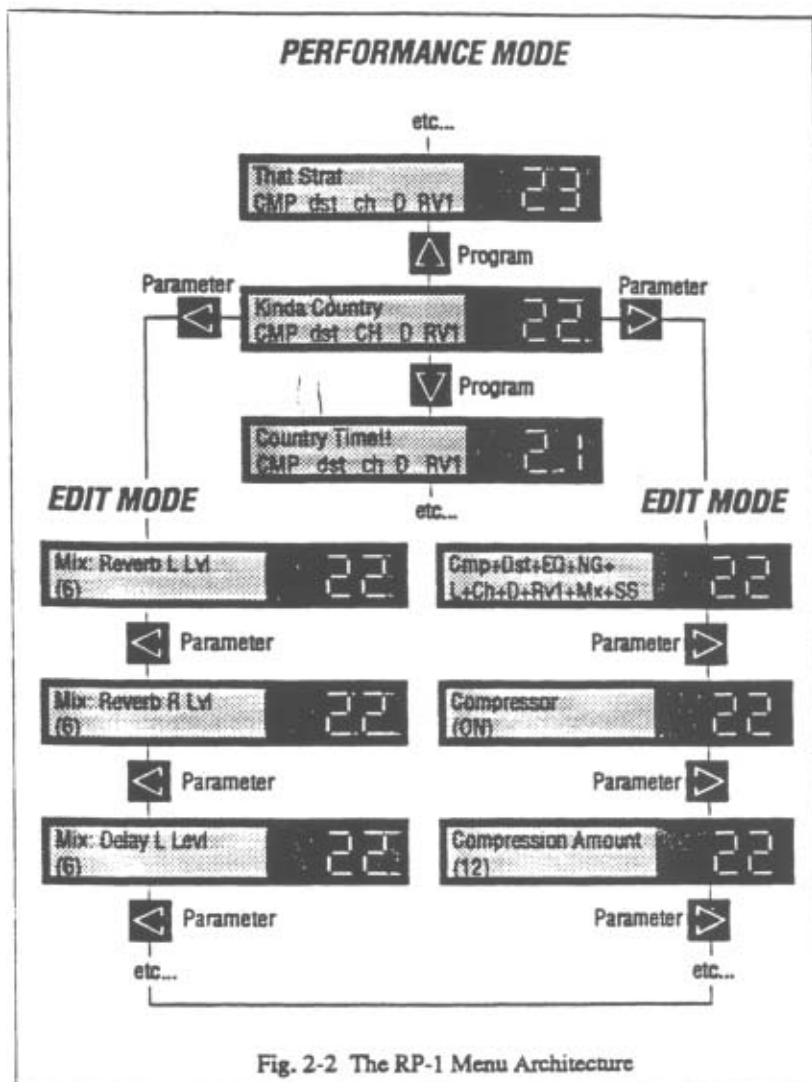
In Either Mode:

• Programs and Sets can be changed independently of one another. The <PROGRAM #>/<SET NUMBER> switch allows you to change Sets and/or Programs. When you change Programs using this switch, it is important to remember that the RP-1 is still operating in the most recently selected Set. This means that if you press a Patch switch after you have changed Programs using the <PROGRAM #>/<SET NUMBER> switch, the unit will revert to the Program assigned to that Patch in the most recently selected Set. EXAMPLE: Let's assume that the RP-1 is in 5 Patch mode, that the most recently selected Set is Set 4 (Patches 15 - 19), and that you have used the front panel Program buttons to select Program number 29 (from the factory, Program 29 is not assigned to Set 4. It appears in Set 6). Selecting Program 29 in this manner does not automatically select Set 6. This means that if you press one of the bottom-row Patch switches, the RP-1 will recall the Program in Set 4 to which the switch is assigned. For more information on changing Programs and Sets, see the next two headings, **Changing Programs** and **Changing Sets**.

• The <BYPASS> footswitch acts as a unit bypass switch, and disables all effects and continuous controllers. The Bypass LED will light when the unit is bypassed. The RP-1 will recognize incoming Program Change messages while in Bypass mode, but the results will not be heard until the unit is switched out of Bypass.

Changing Programs

Programs and Sets can be changed independently of one another. There are two methods for changing Programs. The first uses the control panel buttons, and the procedure is as follows:

• In Performance mode, use the Program <UP>/<DOWN> buttons to scroll to the Program you want to access.

That's all there is to it.

The second method allows you to change Programs from the foot controller. The procedure is as follows:

• From Performance mode, press the <PROGRAM #/SET NUMBER> switch once.

• The display reads ENTER PROGRAM NUMBER. Using the numbered footswitches, enter the number of the Program you want to access (1-150). If the Program number has less than three digits, you must press the PROGRAM #/SET NUMBER switch again to tell the RP-1 that this is the Program you want to access. If the Program number has three digits, the RP-1 will automatically go to the Program you selected.

The third method allows you to change Programs by selecting a footswitch within a Set that has the desired Program number assigned to it.

Changing Sets

Programs and Sets can be changed independently of one another. A Set is a series of Patches with Program numbers assigned to footswitches in the order that you want them to appear. There are ten available Sets on the RP-1. The procedure for changing Sets is as follows:

• Press the <PROGRAM #>/<SET NUMBER> switch twice. The display reads ENTER SET NUMBER. Note that the currently selected Set number is shown in the Program number display.

• Using the numbered switches, enter the set number you want to access (0-9).

You may now access the Set you selected by pressing the Patch switches on the foot controller.

Section 3 - Programming the RP-1

About Programs

Programs are the sound creation palette of the RP-1. They determine how your guitar will sound, and what effects will be used to create that sound. Information included in a Program: the effects configuration algorithm for the Program, all effects parameters associated with that algorithm, and a title.

Program Algorithms

An algorithm is simply an effects chain, and it is the basis of all the effects processing on the RP-1. To create new Programs, you must first select an algorithm that contains all of the effects you want to place in the chain. If an algorithm contains all the effects you need and there are some left over that you don't need, you can simply turn them off using the effects on/off switches of the foot controller or from within the Program. Don't forget to store the changes into memory (see pg. 16), or they will be lost when you change Programs.

There are eleven standard algorithms available, which provide nine digitally controlled analog effects and fifteen digital effects in various combinations (of course, the parameters for the algorithm can be modified to produce almost any possible combination of effects). The analog effects are available for editing in all eleven algorithms, while digital effects appear in all but one. When you select an algorithm, then, you are basically choosing which types of digital effects you want to use.

> **NOTE:** Not all digital effects appear in all algorithms.

The analog section of the RP-1 includes Compression, Rock Tube Distortion, Metal Tube Distortion, Overdrive Distortion, Heavy Sustain Distortion, 7-band Graphic Equalizer, Noise Gate, and Speaker Simulator.

The digital section includes Stereo Chorus, Stereo Flange, Stereo Delay, Ping-Pong Delay, Slapback Delay, Multi-Tap Delay, Delay Modulation, Large Room Reverb, Small Room Reverb, Gated Reverb, Reverse Reverb, Ultimate Reverb, Comb Filter, Digital Effects Mixer, and Stereo Imaging.

Changing Configurations

The procedure for changing Program algorithms (effect configuration) is as follows:

- From Performance Mode, press the <RIGHT> parameter button once. The display shows the currently selected algorithm.

- Using the <UP> or <DOWN> parameter buttons, scroll to the algorithm you want to use for the currently selected Program.

> **NOTE:** If the RP-1 is set to operate in 5 Patch Mode, you will see the effects bypass switch LEDs change to match the default settings of each algorithm.

Once the algorithm has been selected, you are free to scroll through the parameters (using the <LEFT>/<RIGHT> parameter buttons) and modify their values (using the <UP>/<DOWN> parameter buttons).

Effects And Their Parameters

Following is a list of the available effects and the parameters associated with each effect.

Display	Effect/Parameter	Values	Description
Cmp -	Compressor		Compression is an effect that adjusts the source's dynamic range. By compressing the range, notes can be sustained longer and the sound will be tighter.
	Compressor	On, Off	Enables or disables the compressor.
	Compression Amnt	0-31	Varies the amount of compression. A low setting gives a full, natural-sounding dynamic range. A high setting provides a tight, compressed sound.
	Compression Lvl	1-7	Varies the overall level from the compressor.
Dst -	Distortion		Distortion is an effect that causes the original sound to overdrive and distort.
	Distortion	On, Off	Enables or disables distortion.
	Distortion Type	Rock Tube, Metal Tube,	Rock Tube emulates the warm, rich sound created by tube amplifiers. Metal Tube creates the heavy metal sound used by many popular groups. Overdrive is similar to tube distortion with an added overdriven, high-gain punch. Heavy Sustain is the ultimate in rich, crunchy sustain.
	Distortion Balls	0.6 - 11.0	Controls the amount of gain (overdrive) of the distortion.
EQ -	Graphic Equalizer		Equalization is used to compensate for frequency deficiencies and to control an instrument's tonal qualities. The RP-1 provides a seven-band programmable equalizer for accurate tonal shaping. Each band is adjustable in 2 dB steps from 12 dB of boost to 12 dB of cut.
	Graphic EQ	On, Off	Enables or disables the equalizer.
	63 Hz	-12 dB - +12dB	
	160 Hz	-12 dB - +12 dB	
	400 Hz	-12 dB - +12 dB	
	1.0 kHz	-12 dB - +12 dB	
	2.5 kHz	-12 dB - +12 dB	
	6.3 kHz	-12 dB - +12 dB	
	16.0 kHz	-12 dB - +12 dB	
	Master Volume	-12 dB - +12dB	Master Volume controls the overall level of the Program.
NG -	Noise Gate		Gates, or shuts off, the output when the input signal falls below a certain level. Eliminates noise when you're not playing.
	Noise Gate	On, Off	Enables or disables the noise gate.
	NG Threshold	1-10	Sets the threshold (signal level) below which the noise gate kicks in and attenuates the signal. The lower the threshold, the longer a sustain will hold, but the more noise might get through while you're not playing. The gate can also be shut off.
L -	Effects Loop		The effects loop allows you to add external effects to RP-1 effects chains.
	Effects Loop	In, Out	Enables or disables the effects loop.
Ch -	Chorus		Simulates a chorus of instruments playing simultaneously. Created by splitting the signal, detuning and using delay on one, then joining it with the original.
	Chorus	On, Off	Enables or disables the chorus.
	Chorus Delay	0 - 60 milliseconds	The time delay of the chorus effect.
	LFO Sweep Rate	0.00 - 5.00 Hertz	Adjusts the speed of the chorus effect.
	LFO Sweep Depth	0.00 - 6.35 milliseconds	Adjusts the depth of pitch alteration.
	LFO Waveform	Saw Tooth, Sine, Log	Changes the LFO waveform type.

Display	Effect/Parameter	Values	Description
UltRv -	Ultimate Reverb		Has 11 parameters that give you the ability to tailor any aspect of the reverberation or simulate any ambient space. NOTE: Not all reverbs contain all parameters.
	Digital Reverb	On, Off	Enables or disables the reverb.
	Early Rflct Levl	0 - 10	Relative level of the early reflection of reverb. Set two or three levels above the Subsequent Reverb Level to simulate being near the sound source. Set it lower to imply distance from the sound source.
	Subsequent Level	0 - 10	Relative level of the subsequent reverb. Use with the early reflection level to give a near or far sound.
	Norm Reflctivity	1.0 - 99 seconds	Defines how reflective the surfaces in the simulated environment will be. Set high for reflective surfaces, low for absorptive surfaces. Different from Damping in that Damping controls only high frequencies. Normalized Reflectivity controls reflections at all frequencies.
	Norm Room Volume	0.1 - 1.0	Volume of the simulated environment.
	Damping Factor	1 - 10	Amount of high frequency absorption in the subsequent reverb. Set high to simulate surfaces such as drapes or carpet. Set low to simulate hard, reflective surfaces such as concrete or steel.
	Envelopment	1 - 10	Width and depth of the stereo image. Set high for a wide, surrounding stereo image. Set low for a tight image that centers in front of the listener.
	Subsequent Delay	0 - 70 milliseconds	Amount of pre-delay for the subsequent reverb. Generally a higher value than Early Reflection Delay.
	Subsqnt Diffusion	1 - 10	Amount of diffusion in the subsequent reverb. Set high to smooth a grainy or fluttery sound. With short decay times, set low to avoid metallic ringing.
	Early Delay Time	0 - 70 milliseconds	Amount of pre-delay for the early reverb. Generally set from 0 - 20 ms and always less than the subsequent reverb delay for natural sound.
	Early Diffusion	1 - 10	Amount of diffusion in the early reverb, which dissipates and becomes subsequent reverb. This parameter affects the subsequent reverb diffusion.
	Dry Level	0 - 10	Controls the level of the dry (uneffected) signal.
Rev1 -	Reverb 1		Short, general purpose reverb.
	Digital Reverb	On, Off	Enables or disables the reverb.
	Reverb In: Dry	0 - 10	Controls the amount of dry (uneffected) signal being fed to the reverb.
	Reverb In: Delay	0 - 10	Controls the amount of delay signal fed to the reverb.
	Reverb Pre-delay	0 - 60 milliseconds	Amount of pre-delay before you hear the first reverberations.
	Reverb Filter	Bright, Soft, Warm	Controls the brightness of the simulated listening environment.
	Reverb Decay	100 - 1200 milliseconds	Length of time for the reverb to decay.
Rev2 -	Reverb 2		Long, general purpose reverb.
	Digital Reverb	On, Off	Enables or disables the reverb.
	Reverb in: Dry	0 - 10	Controls the amount of dry (uneffected) signal being fed to the reverb.
	Reverb In: Chorus	0 - 10	Controls the amount of chorus signal fed to the reverb.
	Reverb Pre-delay	0 - 60 milliseconds	Amount of pre-delay before you hear the first reverberations.
	Reverb Filter	Bright, Soft, Warm	Controls the brightness of the simulated listening environment.

Display	Effect/Parameter	Values	Description
	Reverb Decay	1.00 - 20.00 seconds	Length of time for the reverb to decay.
RvRv -	Reverse Reverb		Unlike normal reverb, the reverse reverb's decay is heard after the original sound, following which the reverb builds and cuts off.
	Digital Reverb	On, Off	Enables or disables the reverse reverb.
	Reverb Pre-delay	0 - 80 milliseconds	Amount of pre-delay before you hear the first reverberations.
	Reverse Time	50 - 600 milliseconds	The length of the reverse reverb.
	Accent Delay	-50 - +50 milliseconds	Adjusts the time between the end of the reverse reverb and the attack of the dry (uneffected) sound.
GtRv -	Gated Reverb		Reverb effect that decays for a determined length of time, then cuts off abruptly.
	Digital Reverb	On, Off	Enables or disables the gated reverb.
	Reverb Pre-delay	0 - 80 milliseconds	Amount of pre-delay before you hear the first reverberations.
	Gate Envelope	Flat, Decaying	Controls whether the gate closes abruptly or decays out.
	Gate Decay Time	50 - 600 milliseconds	Adjusts how quickly the gate closes after the reverb falls below the threshold level.
	Accent Delay	-50 - +50 milliseconds	Adjusts the time between the end of the reverse reverb and the attack of the dry (uneffected) sound.
Mx -	Digital Mixer		Allows individual effect mixing.
	Mix: Dry Level	0 - 10	The amount of dry (uneffected) signal present at the outputs of the RP-1.
	Mix: Chorus R Level	0 - 10	The amount of the right side of the chorus effect present at the outputs of the RP-1.
	Mix: Chorus L Level	0 - 10	The amount of the left side of the chorus effect present at the outputs of the RP-1.
	Mix: Flange R Level	0 - 10	The amount of the right side of the flange effect present at the outputs of the RP-1.
	Mix: Flange L Level	0 - 10	The amount of the left side of the flange effect present at the outputs of the RP-1.
	Mix: Delay R Level	0 - 10	The amount of the right side of the delay effect present at the outputs of the RP-1.
	Mix: Delay L Level	0 - 10	The amount of the left side of the delay effect present at the outputs of the RP-1.
	Mix: Tap 1 R Level	0 - 10	The amount of the right side of the tap 1 effect present at the outputs of the RP-1.
	Mix: Tap 1 L Level	0 - 10	The amount of the left side of the tap 1 effect present at the outputs of the RP-1.
	Mix: Tap 2 R Level	0 - 10	The amount of the right side of the tap 2 effect present at the outputs of the RP-1.
	Mix: Tap 2 L Level	0 - 10	The amount of the left side of the tap 2 effect present at the outputs of the RP-1.
	Mix: Tap 3 R Level	0 - 10	The amount of the right side of the tap 3 effect present at the outputs of the RP-1.

Mix: Tap 3 L Level	0 - 10	The amount of the left side of the tap 3 effect present at the outputs of the RP-1.
Mix: Tap 4 R Level	0 - 10	The amount of the right side of the tap 4 effect present at the outputs of the RP-1.
Mix: Tap 4 L Level	0 - 10	The amount of the left side of the tap 4 effect present at the outputs of the RP-1.
Mix: Reverb R Level	0 - 10	The amount of the right side of the reverb effect present at the outputs of the RP-1.
Mix: Reverb L Level	0 - 10	The amount of the left side of the reverb effect present at the outputs of the RP-1.

Basic Program Editing

The first 75 memory locations (programs 1-75) of the RP-1 memory are user-programmable to allow creation of custom sounds or variations on the factory preset Programs. When shipped from the factory, these locations contain copies of the factory presets. Here are some important things to remember when editing Programs:

- All user-modified Programs must be stored in memory locations 1-75. The RP-1 will not store user Programs in locations 76-150.

- In Performance Mode, the display shows the title of the Program on the top line and the effects algorithm on the bottom line.

- If an effect is OFF, it will be displayed in lower case letters when in Performance Mode. When the effect is ON, it will be displayed in upper case letters in Performance Mode.

- If an effect in the selected algorithm is turned OFF, its parameters will not appear in the parameter menus. In order to modify the effect's parameters, the effect must be turned ON.

- The MASTER VOLUME parameter affects the overall output level of the Program. This parameter is particularly useful for matching levels between Programs.

To customize a Program, you must start by selecting one of the first 75 memory locations. Since the customized Program can be stored at any location within the first 75 presets, the Program number you select for editing is not critical. However, selecting a Program that is similar to the type of sound you are trying to achieve is often a helpful programming technique, and it can be a real time-saver if a quick sound is needed.

- In Performance mode, the display shows the name of the Program and the effects types that are available for the Program (note that effects in upper case letters are on, and those in lower case letters are off). Press the <RIGHT> parameter button and select the algorithm you want using the <UP>/<DOWN> parameter buttons.

- Using the <LEFT>/<RIGHT> parameter buttons, scroll to the effect parameter you want to change.

- Change the value of the parameter using the <UP>/<DOWN> parameter buttons.

    NOTE: The parenthesis around parameter values indicate that this is the currently stored value for the parameter. If you decide that the modified effect doesn't sound right, you have a convenient way to get the parameter back to what it was originally.

- Scroll to the next parameter you want to edit using the <LEFT>/<RIGHT> parameter buttons. Repeat from step 3.

Program Titling

Use the <TITLE> button to give your Program a custom name. A Program name can be up to 16 characters in length, and the procedure is as follows:

- From Performance Mode or Edit Mode, press the Title button. The display reads EDIT TITLE and a cursor appears under the first character of the Program name. To modify the character, use the <UP>/<DOWN> parameter buttons and scroll to the character you want to place in that position.

- Move the cursor to the next character using the <LEFT>/<RIGHT> parameter buttons. Repeat the procedure from step 1.

Comparing Programs

The <COMPARE> button allows you to compare the edited Program with the original without losing the edited settings. To compare an edited Program with the original:

- Press the <COMPARE> button once. The RP-1 will temporarily switch to the original Program settings, and the display will read ...COMPARING... until the <COMPARE> button is pressed again, at which time the Program will switch back to the edited version.

This operation may be performed as many times as you want, but always make sure that you are not in Compare mode after you are finished. The RP-1 will not respond to any buttons until you exit Compare mode.

Storing/Copying Programs

In order for your modified Program to be available for later recall, you must store it in memory. This is accomplished using the <STORE> button. The procedure for storing a Program is as follows:

- Press the <STORE> button once. The display reads SAVE CHANGES TO PROGRAM ##. This screen allows you to select the location in which you want to store the new Program.

- Using the <UP>/<DOWN> program buttons, scroll to the Program number at which you want to store the new Program.

- To store the Program, press the <STORE> button again. The display will briefly read ...STORING..., and then you will automatically be returned to Performance Mode. To abort the command, press <COMPARE>.

The Store function can also be used to copy Programs from one memory location to another. If no changes have been made to the currently selected Program and the <STORE> button is pressed, the display will read COPY TO PROGRAM ##. Simply select the memory location in which you want to place a copy of the currently selected Program and press <STORE> again. The display will briefly read ...COPYING... and you will automatically be returned to Performance Mode. To abort the command, press <COMPARE>.

The Utility Menu

The Utility section of the RP-1 contains several menus. Included among these menus are the Speaker Simulator Setup Menu, MIDI Setup Menu, RP-1 Footswitch Setup Menu, and the Factory Preset Restore Menu. These menus are reached by pressing the <UTILITY> button.

Choosing A Speaker Simulator

The Speaker Simulator section of the RP-1 is provided to optimize performance of the unit with various guitar/amp combinations, and it is the first Utility menu you will encounter after power-up. The first screen allows you to choose one of the four factory or five user-programmable Speaker Simulator programs. The four factory programs and their uses are as follows:

- **Simulator 1 Gtr Pwr Amp & Cab** - This is the program to choose if you use extension guitar cabinets with a power amp designed for guitar.

- **Simulator 2 Ref Pwr Amp & Cab** - If you are using a reference power amp (such as a power amp designed for studio control rooms) with extension cabinets, use this program.

- **Simulator 3 Combo Amp w/10"<** - This program is optimized for use with combo amps containing 10 inch or smaller speakers.

- **Simulator 4 Combo Amp w/12">** - This program is optimized for use with combo amps containing 12 inch or larger speakers.

The remaining programs are all user programmable, which means that if you don't like the sound of any of the factory Speaker Simulators, you can build your own from the ground up (this is covered in the next section, **The Speaker Simulator Setup Menu**). The process for *selecting* a Speaker Simulator is as follows:

- **Press the <UTILITY> button.**

- Using the <LEFT>/<RIGHT> parameter buttons, scroll to the Speaker Simulator selection screen of Utility.

- Using the <UP>/<DOWN> parameter buttons, select the Simulator program you want to use.

Exit the Utility Menu by pressing the <UTILITY> button again.

> **IMPORTANT:** Changing the Speaker Simulator program will affect the timbre of all programs in the RP-1.

The Speaker Simulator Setup Menu

The Speaker Simulator Setup Menu allows you to set up the user Speaker Simulator programs to suit your own taste. There are five user Simulators, and each has its own six-band graphic equalizer for accurate tone shaping. The frequency centers for each band are 100 Hz, 160 Hz, 400 Hz, 1.0kHz, 2.5kHz, and 6.3kHz. The boost/cut ranges for each band are +/- 12 dB in 2 dB steps. The procedure for creating your own Speaker Simulator program is as follows:

- After you have selected the Speaker Simulator program you want to edit (using previous procedure), press the <UTILITY> button once and scroll to SPEAKER SIMULATOR SETUP MENU.

- Press the <DOWN> parameter button to access the menu. The display reads SPEAKRSIM U1. This indicates that you are currently editing User Program number 1.

- Using the <UP>/<DOWN> parameter buttons, scroll to the Speaker Simulator program you want to edit.

- Use the <RIGHT> parameter button to select the frequency band you want to edit. Note that the frequency and the boost/cut value for that frequency now appear in the display.

- Modify the boost/cut values for each frequency using the <UP>/<DOWN> parameter buttons.

- When you are finished editing the Simulator program, use the <LEFT>/<RIGHT> parameter buttons to scroll until the display reads RETURN TO MAIN UTILITY MENU.

- Press the <UP> parameter button. This will return you to the main Utility menu.

To leave the Utility menu, Press the <UTILITY> button.

The MIDI Setup Menu

The MIDI Setup Menu is the control center for RP-1 interaction with other MIDI devices. The MIDI Setup Menu contains several useful functions, including MIDI input and output mapping, continuous controller linkages, and MIDI data dumping. To access the MIDI Setup Menu, press the <UTILITY> button and scroll left or right until the display reads MIDI SETUP MENU. Press the <DOWN> parameter button. The SubMenus included under the MIDI Setup Menu are: RP-1 MIDI Channel, Program Receive (mapping), External Device (mapping), Front Panel PC (Program Change), Continuous Controller assignments, MIDI Data Dump, and MIDI Program Dump.

RP-1 MIDI Channel

The RP-1 MIDI Channel parameter allows you to select the MIDI channel on which the RP-1 will receive MIDI data. This can be set to channels 1 - 16, ALL CHANNELS, or DISABLED. If this parameter is disabled, the RP-1 will not recognize incoming MIDI data.

- Scroll to RP-1 MIDI CHANNEL in the MIDI Setup Menu of Utility.

- Using the <UP>/<DOWN> parameter buttons, select the channel on which you want the RP-1 to receive MIDI data.

Prg Receive Map

The PRG RECEIVE MAP function allows you to map incoming Program Changes that are within MIDI range to any Program out of MIDI Program Change number range on the RP-1. For example, suppose you want to access Program #146 using a MIDI Program Change. Since MIDI only supports Program Change numbers 1 - 128, Program Change number 146 would normally be impossible to receive. With the RP-1's flexible MIDI input mapping, however, you can assign a Program Change number that MIDI *will* recognize to be received as Program #146 on the RP-1.

To illustrate, let's assign Program Change number 26 to change the RP-1 to Program #131.

- Scroll to PRG RECEIVE MAP in the MIDI Setup Menu of Utility. The display reads MIDI 1 ->RP1   1. This display essentially means "MIDI Program Change number 1 will activate Program number 1 on the RP-1". Since we need Program Change #26 to trigger the RP-1, set the MIDI Program Change number to 26.

- Using the <RIGHT> parameter button, scroll to RP1 ###.
- Change this number to 131 using the <UP> parameter button. Press <UTILITY>.

When the RP-1 receives Program Change number 26, program 131 will be accessed. This is particularly useful when used in conjunction with device mapping.

Device Mapping

Device mapping allows you to control and give custom names to up to four external devices through MIDI, sending each device an independent Program Change on individual MIDI channels. This function is accomplished simply by changing Patches on the RP-1. To assign devices:

- Scroll to the DEVICE screen in the MIDI Setup Menu of Utility. The display reads DEVICE 1 MIDI CHANNEL 1. Note that the cursor is under DEVICE.

- Using the <UP>/<DOWN> parameter buttons, select the device number (1-4) you want to edit.

- Press <TITLE>. The cursor now appears under the first character in the name of the selected device. Change the character using the <UP>/<DOWN> parameter buttons. To move to the next character, press the <RIGHT> parameter button. Continue in this manner until the name of the device is displayed the way you want. When you are finished, press <TITLE> again.

- Move the cursor to MIDI CHANNEL using the <RIGHT> parameter button.

- The cursor now appears under the MIDI channel number. Using the <UP>/<DOWN> parameter buttons, choose the MIDI channel you want the selected device to be controlled on (1-16 or DIS-ABLED). If this parameter is set to DISABLED, the RP-1 will not send out any Program Change messages for that device. Press the <RIGHT> parameter button once.

- The display reads DEVICE 1 PRG 1 SENDS 1. The cursor is under the DEVICE number. This screen controls the Program Change mapping duties for the external devices. First, the device to be mapped must be selected using the <UP>/<DOWN> parameter buttons (typically, the device number you choose on this screen will be the same as on the previous screen). Press the <RIGHT> parameter button once.

- The cursor now appears under PRG 1. This parameter selects which Program number on the RP-1 will send the mapped Program Change to the external device. Select the RP-1 Program number (1-75) using the <UP>/<DOWN> parameter buttons. Press the <RIGHT> parameter button once.

- The cursor now appears under DISABLED. This parameter determines the mapped Program Change number that the external device will receive when the appropriate Patch is selected on the RP-1. If this parameter is set to DISABLED, no Program Changes will be sent to the device when the PRG assigned to that device is sent. Select the Program Change number that will be sent (1-128, DISABLED) using the <UP>/<DOWN> parameter buttons.

You may map as many devices (up to 4) or incoming Program Change messages as you like. These are stored in memory automatically, and are always active until you change them or until the factory presets are restored.

Front Panel PC (Program Change)

FRONT PANEL PC determines whether or not Program Changes will be sent as you scroll through the Programs using the Program <UP>/<DOWN> buttons. This parameter is either ENABLED or DIS-ABLED.

Assigning Continuous Controllers

The RP-1 is capable of responding to multiple Continuous Controllers (2 Local and 1 Global) as well as sending out Continuous Controller numbers with a single value (for the purpose of switching remote effects on or off). These parameters are found in the MIDI Setup Menu of Utility. The first parameter in this menu that deals with Continuous Controllers (CCs) is the CC SEND parameter. This parameter allows you turn remote MIDI effects on or off by sending continuous controller messages. The procedure is as follows:

- Scroll to COMPRESSOR CC SEND DISABLED in the MIDI Setup Menu of Utility. The cursor is under COMPRESSOR. Using the <UP>/<DOWN> parameter buttons, select the (remote) effect you want to control. Press the <RIGHT> parameter button.

- The cursor is now under DISABLED. This parameter selects the MIDI channel on which the remote effect is to be turned on or off. The options for this parameter are 1-16, ALL, or DISABLED. If this is set to DISABLED, the selected remote effect will not be controlled by the RP-1. If this is set to ALL, the RP-1 sends the effect on/off CC on all MIDI channels.

- To assign another remote effect to be controlled from the RP-1, press the <LEFT> parameter button and use the <UP>/<DOWN> parameter buttons to select another effect. Repeat the process from step 1.

The next three CC-related parameters in the menu deal with incoming continuous controller messages, how they are assigned, which MIDI channels they are assigned to respond on, etc. The first of the three is the Global Continuous controller. The Global CC of the RP-1 is always active on all Patches unless it is disabled from this menu. The parameters available for control by incoming CC messages are:

Accent Delay	Bypass	Chorus	Chorus Delay
Compression Amount	Compression Level	Compressor (On/Off)	Damping Factor
Delay Diffusion	Delay Feedback	Delay In: Chorus	Delay In: Dry
Delay In: Flange	Delay Rolloff	Delay Time	Delay Time Feed
Delay Time Tap1	Delay Time Tap2	Delay Time Tap3	Delay Time Tap4
Digital Delay (On/Off)	Digital Reverb (On/Off)	Distortion (On/Off)	Distortion Balls
Distortion Type	Dry Level	Early Delay Time	Early Diffusion
Early Rflct Level	Effects Loop	Envelopment	EQ 63 Hz
EQ 160 Hz	EQ 400 Hz	EQ 1.0 kHz	EQ 2.5 kHz
EQ 6.3 kHz	16.0 kHz	Flange (On/Off)	Flange Delay
Flange Feedback Phase	Flange Feedback	Gate Decay Time	Gate Envelope
Graphic EQ (On/Off)	LFO Sweep Depth	LFO Sweep Rate	LFO Waveform
Master Volume	Mix: Accent Left	Mix: Accent Right	Mix: Chorus L Level
Mix: Chorus Level	Mix: Chorus R Level	Mix: Delay L Level	Mix: Delay R Level
Mix: Dry Left	Mix: Dry Level	Mix: Dry Right	Mix: Flange L Level
Mix: Flange Level	Mix: Flange R Level	Mix: Gate Left	Mix: Gate Right
Mix: Reverb L Level	Mix: Reverb R Level	Mix: Reverse L Level	Mix: Reverse R Level
Mix: Tap1 L Level	Mix: Tap1 R Level	Mix: Tap2 L Level	Mix: Tap2 R Level
Mix: Tap3 L Level	Mix: Tap3 R Level	Mix: Tap4 L Level	Mix: Tap4 R Level
Noise Gate Threshold	Noise Gate (On/Off)	Norm Reflectivity	Norm Room Volume
Repeat Hold	Reverb Decay	Reverb Filter	Reverb In: Chorus
Reverb In: Delay	Reverb In: Dry	Reverb In: Flange	Reverb Predelay
Reverse Time	Subsequent Delay	Subsequent Level	Subsequent Diffusion

To set up a Global Continuous Controller, the procedure is as follows:

- Scroll to ACCENT DELAY NOT LINKED GLOBAL in the MIDI Setup Menu of Utility. The cursor appears under ACCENT DELAY. Select the effect parameter you want to control with CC messages and press the <RIGHT> parameter button.

- The cursor now appears under NOT LINKED. Using the <UP>/<DOWN> parameter buttons, select the CC number that will be controlling the selected parameter.

    NOTE: In order to respond to incoming CCs, the RP-1 MIDI CHANNEL setting must match the channel designation of the incoming messages. RP-1 MIDI CHANNEL can be set to any one of the 16 MIDI channels, or ALL CHANNELS. Also note that the Global CC setup screen says GLOBAL on it.

The next two screens in the MIDI Setup Menu are for the Local CC assignments. Both Local CCs are modified in exactly the same way, so we will only cover one.

To set up a Local CC, the procedure is as follows:

- From Performance Mode, you must first select the Patch that you want to be affected by Continuous Controller messages.

- Scroll to COMPRESSOR NOT LINKED PRG 1 in the MIDI Setup Menu of Utility. The cursor now appears under COMPRESSOR.

- Select the effect parameter you want to control with CC messages and press the <RIGHT> parameter button.

- The cursor now appears under NOT LINKED. Using the <UP>/<DOWN> parameter buttons, select the CC number that will be controlling the selected parameter.

    NOTE: In order to respond to incoming CCs, the RP-1 MIDI CHANNEL setting must match the channel designation of the incoming messages. RP-1 MIDI CHANNEL can be set to any one of the 16 MIDI channels, or ALL CHANNELS. Also note that the Local CC setup screens list the Program number for which the CC will have effect.

MIDI Data Dump

This option allows you to dump a copy of the entire contents of the RP-1 memory out the MIDI port. This is particularly useful for backing up the memory of the RP-1, or for copying all the Programs from one RP-1 to another. The procedure is as follows.

- Connect the MIDI Out of the RP-1 to the MIDI in of another RP-1, computer, or external System Exclusive recording device.

- Scroll to DUMP MIDI DATA? in the MIDI Setup Menu of Utility.

- The display reads PRESS (down) FOR YES.

- To dump the entire contents of the RP-1 memory, press the <DOWN> parameter button.

- The display briefly reads MIDI DATA DUMP ....COMPLETE....

MIDI Program Dump

This option allows you to dump an individual Program from the RP-1 out the MIDI port to another device. This function also allows you to dump the selected Program as a Program number other than its own.

To illustrate, suppose you and your friend both have RP-1s, and you came up with the coolest guitar sound that either of you have ever heard. Your friend wants that sound on his RP-1, but instead of going through the lengthy process of scrolling through all the available parameters and writing down their values, all you have to do is connect a MIDI cable to the Out of your RP-1 to the MIDI In of his. But wait! If you dump your new program to the same location in memory on your friend's RP-1, it will erase the program that's already there (which, by the way, happens to be a great sound also). To avoid this dilemma, do the following:

- Scroll to the DUMP PROGRAM option in the MIDI Setup Menu of Utility.

- The cursor appears under DUMP PROGRAM ###. Using the <UP>/<DOWN> parameter buttons, select the RP-1 program you want to dump and press the <RIGHT> parameter button.

- The cursor appears under AS ###. Using the <UP>/<DOWN> parameter buttons, select the Program number you want to dump *to* and press the <RIGHT> parameter button.

- Press the <DOWN> parameter button to begin the dump.

- The display briefly reads PROGRAM DUMP ....COMPLETE....

The Footswitch Setup Menu

This is a very important utility, as it allows you to assign any Program number to any Patch switch, sets the operating mode for the RP-1 (5 or 10 Patch), and allows you to define which Programs will appear in your Sets.

Footswitch Mode

This function selects whether the RP-1 will operate in 5 Patch/FX Bypass Mode or 10 Patch Mode (optional FX Bypass). To select the footswitch mode, the procedure is as follows:

- Scroll to FOOTSWITCH MODE in the Footswitch Setup Menu of Utility.

- Use the <UP>/<DOWN> parameter buttons to select the operating mode.

Assigning Programs to Patches

To assign Program numbers to a Patch switch in a Set, the procedure is as follows:

- Scroll to SET 0 PATCH 1 IS PROGRAM 1 in the Footswitch Setup Menu. This display tells you that when you are in Set 1 and you press Patch switch 1, Program number 1 will be called up. All three of these numbers may be modified to facilitate custom Set creation with any sequence of Program numbers available in any given Set.

- The cursor now appears under SET 0. Using the <UP>/<DOWN> parameter buttons, select the Set you want to edit. Press the <RIGHT> parameter button.

- The cursor now appears under PATCH 1. Select the Patch switch number to which you want to assign a Program number. Press the <RIGHT> parameter button.

• The cursor now appears under PROGRAM 1. Using the <UP>/<DOWN> parameter buttons, select the Program number that you want the selected Patch switch to call up.

This procedure may be repeated for any number (up to the limits of the RP-1) of Sets, Patch switches, and Program numbers.

Footswitches may also be assigned to act as effect on/off switches (in either 5 or 10 Patch mode) for the compressor, distortion, graphic EQ, noise gate, effects loop, delay, reverb, and Repeat Hold. The Repeat Hold mode is an infinite repeat function, meaning that when you engage the Repeat Hold, the delay will repeat indefinitely with no decay of volume. Patch switch 5 in Set #2 is set up as a Repeat Hold. Here's an experiment: try playing a rhythmic pattern that is equal in length to the amount of delay time. Kick on the infinite repeat, switch on the distortion section, and solo over the repeats. Many interesting effects can be produced using this technique.

Footswitch LEDs

This option is particularly useful in extreme low-light environments. It allows you to reverse the indicator status of the switch LEDs (i.e. when an LED is off, its function is active, and vice versa).

Restoring Factory Presets

This option allows you to restore the contents of the RP-1's memory to the original factory condition.

> **WARNING:** Performing this function will destroy all user-programmed data, and all such data will be lost forever!

To restore the factory presets, the procedure is as follows:

• Scroll to FACTORY PRESET RESTORE in the Utility menu. Press the <DOWN> parameter button.

• The display reads ARE YOU SURE? PRESS (up) FOR YES. This is your last chance to change your mind. To restore the factory presets, press the <UP> parameter button. To abort the command, press any other key.

Appendix A

Effects Configurations

There are eleven algorithms (effect configurations)available for editing in the RP-1. All algorithms include all of the analog effects (compression, distortion, EQ, noise gate, speaker simulator, etc.), so when you select an algorithm, what you're really doing is selecting which types of *digital* effects you want included in the Program. The effects configurations available on the RP-1 are as follows:

Cmp+Dst+EQ+NG+L+SS - Compression, distortion, equalization, noise gate, level control, speaker simulator.

Cmp+Dst+EQ+NG+L+UltRv+SS - Compression, distortion, equalization, noise gate, level control, Ultimate Reverb, speaker simulator.

Cmp+Dst+EQ+NG+L+GtRv+Mx+SS - Compression, distortion, equalization, noise gate, level control, gated reverb, digital mixer, speaker simulator.

Cmp+Dst+EQ+NG+L+RvRv+Mx+SS - Compression, distortion, equalization, noise gate, level control, reverse reverb, digital mixer, speaker simulator.

Cmp+Dst+EQ+NG+L+Ch+D+Rv1+Mx+SS - Compression, distortion, equalization, noise gate, level control, chorus, delay, short reverb, digital mixer, speaker simulator.

Cmp+Dst+EQ+NG+L+Fl+D+Rv1+Mx+SS - Compression, distortion, equalization, noise gate, level control, flanger, delay, short reverb, digital mixer, speaker simulator.

Cmp+Dst+EQ+NG+L+Ch+D+Rv1+Mx+SS - Compression, distortion, equalization, noise gate, level control, chorus, delay, long reverb, digital mixer, speaker simulator.

Cmp+Dst+EQ+NG+L+Fl+D+Rv1+Mx+SS - Compression, distortion, equalization, noise gate, level control, flanger, delay, long reverb, digital mixer, speaker simulator.

Cmp+Dst+EQ+NG+L+Ch+4TD+Mx+SS - Compression, distortion, equalization, noise gate, level control, chorus, 4-tap delay, digital mixer, speaker simulator.

Cmp+Dst+EQ+NG+L+Fl+4TD+Mx+SS - Compression, distortion, equalization, noise gate, level control, flanger, 4-tap delay, digital mixer, speaker simulator.

Cmp+Dst+EQ+NG+L+ModDly+Mx+SS - Compression, distortion, equalization, noise gate, level control, modulation delay, digital mixer, speaker simulator.

Any of the effects and the parameters associated with them in an algorithm may be turned on, off, adjusted, tweaked, twiddled, or otherwise noodled around with in any possible combination (within the limits of the algorithm). For a listing of all the parameters and their descriptions, see pg. 11.

User Program Sheets

Photocopy this page and record your Program parameters.

Program   Number_____   Configuration_____
Title_____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

Program   Number_____   Configuration_____
Title_____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

Program   Number_____   Configuration_____
Title_____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

Program List

Following is a list of the factory Program numbers and titles available on the RP-1.

1. Silk Stockings
2. Rippin' Solo
3. Blue Scream
4. THUNDER MUG
5. Star Lifter
6. Sequence Delay
7. Symphony Steel
8. The Ruffy
9. Layered Echoes
10. Crystalline
11. Straight Cab
12. Mad Reversal
13. What Mess ?
14. 4-12 Rhythm
15. New Jazz
16. West Coast Pan
17. Clean Room
18. Texas Rock
19. Neck Pickup Blue
20. BIG COUNTRY
21. Country Time!!
22. Kinda Country
23. That Strat
24. Rhythm No Hero
25. DryRite/Wet Left
26. Buxx Crunch
27. Figure It 8!
28. Stratin Sheets
29. MIRROR*RORRIM
30. Metal Mash
31. 4 Quick Taps
32. Meditation
33. HAN SOLO
34. 60's Clean
35. Heeeeer's Flangy
36. ChorusVerb
37. Soft Pickin'
38. LK Powell Canyon
39. AnotherCrunch
40. Witch Lead
41. Fat Funk Chorus
42. FAT WIGGY
43. Aquele Abraco
44. Slite Flange
45. Pink Zebra
46. Crunch Rhythm
47. Clean Rhythm
48. Bathtub Solo
49. Chunk n' Snap

50. Cranked Tank
51. Grindin' Rhythm
52. Crunchenstein
53. Keep It Simple
54. Tapped Balls
55. Rockergate
56. Whammy Monster
57. Lead In Yer Face
58. Stealth Solo
59. Ain't It Sweet
60. No Wanks!
61. Picker Grinder
62. Clean Reversal
63. Over The Top
64. Single Coil Funk
65. Black Shack
66. ODYSSEY X
67. "TUBE" Steak
68. Sweet&Sour Solo
69. Biff "Crunchy"
70. Sludge Nymph
71. Marrow Escape
72. Aku Aku
73. Brass Monkee
74. Shred Head
75. JUST SQUEEZE IT

76 - 150 are the same as Programs 1 - 75. Programs 1 - 75 are user programs, and 76 - 150 are factory sounds that cannot be written over.

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Channel	1	OMNI	
Mode	Default Messages Altered	X	X	
Note Number	True Voice	X	X	
Velocity	Note ON Note OFF	X	X	
After Touch	Key's Ch's	X	O	
Pitch Bender		X	X	
Control Change	71 72 73 74 75 76 77 78 79		0 - 120	
Prog Change	True #	1 - 128	1 - 128	Mappable
System Exclusive		O	O	
System Common	:Song Pos :Song Sel :Tune	X	X	
System Real Time	:Clock :Commands	X	X	
Aux Mes-sages	:Local ON/OFF :All Notes Off :Active Sense :Reset	X	X	
Notes				

Mode 1 : OMNI ON, POLY   Mode 2 : OMNI ON, MONO   O : Yes
Mode 3 : OMNI OFF, POLY   Mode 4 : OMNI OFF, MONO   X : No

System Exclusive Format

The DOD/DigiTech Electronics System Exclusive Format facilitates use and control of various signal processing devices manufactured by DOD DigiTech Electronics. The format allows different types of data transfer with capability for future expansion.

Currently, a DOD/DigiTech digital signal processor can receive machine-dependent microcode, and user-programmed parameters can be received from and dumped to external devices.

For further information, write: Attention: Software Engineering
DOD Electronics
5639 South Riley Lane
Salt Lake City, Utah, 84107
U.S.A.

DigiTech Warranty

1. The warranty registration card must be mailed within ten days after purchase date to validate this warranty.

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