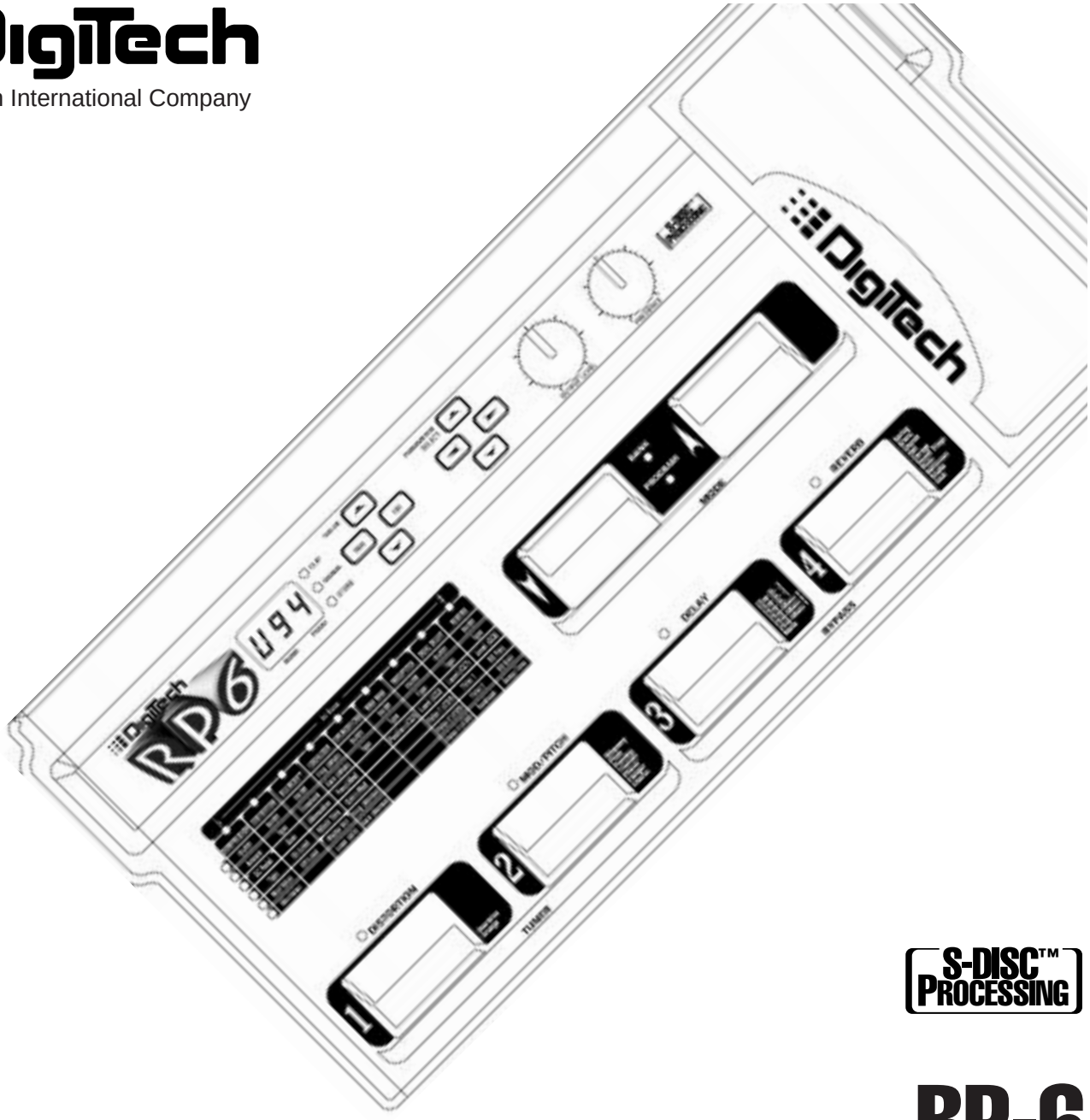
DigiTech

A Harman International Company



S-DISC™ PROCESSING

RP-6

Guitar Signal Processor/Foot Controller and Preamp

Owner's Manual

DECLARATION OF CONFORMITY

Manufacturer's Name: Harman Music Group Incorporated

Manufacturer's Address: 8760 S. Sandy Parkway
Sandy, Utah 84070, USA

declares that the product:

Product Name: RP-6

Product Options: All (requies a Class II power adapter that conforms to the requirements of EN60065, EN60747, or equivalent).

conform to the following Product Specifications:

Safety: EN 60065 (1993)

IEC 65 (1987) 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.

.

Harman Music Group Incorporated
Vice President of Engineering
8760 S. Sandy Parkway
Sandy, Utah 84070, USA

Effective October 1, 1996

European Contact: Your Local DigiTech Sales and Service Office or
International Sales Office
3 Overlook Drive #4
Amherst, New Hampshire 03031, USA
Tel (603) 672-4244
Fax (603) 672-4246

1

INTRODUCTION

Congratulations, and thank you for your purchase of the DigiTech RP-6 Guitar Signal Processor / Preamp. The RP-6 offers you the same fresh approach to guitar sound creation as the now famous RP-10. DigiTech's revolutionary S-DISC™ processor makes it all happen. Its compact size occupies less floor space, while maintaining the power of analog distortion, with the precision and clarity of the S-DISC™ digital multi-effects. Special features of the RP-6 include:

- Full bandwidth effects (20-20kHz)
- Stereo signal processing
- Quick Module and Parameter access
- CC pedal which allows for real time control of certain Parameters
- Programmable cabinet emulation for running direct to a mixing console (great for both studio and live applications)
- Front panel Presence control and headphone output

All of your effects needs can be filled by a single unit. This owner's manual is your key to understanding the powerful world of the RP-6. Read it carefully. After you've had time to familiarize yourself with the unit, try experimenting with unusual effects settings. You may achieve some interesting results.

SAFETY PRECAUTIONS

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 equipment during storms to prevent damage.

U.K. ONLY - A moulded mains plug that has been cut off from the cord is unsafe. Discard the mains plug at a suitable disposal 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 BS1362.

LITHIUM BATTERY WARNING

CAUTION! This product contains a lithium battery. There is danger of explosion if battery is incorrectly replaced. Replace only with an Eveready CR 2032 or equivalent. Make sure the battery is installed with the correct polarity. Discard used batteries according to manufacturer's instructions.

ADVARSEL! Lithiumbatteri - Eksplosjonsfare. Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten. Brukt batteri returneres apparatleverandøren.

ADVARSEL! Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri av samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

VAROITUS! Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

VARNING! Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

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 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.

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.

SECTION 1 - STARTUP

SUPPLYING POWER

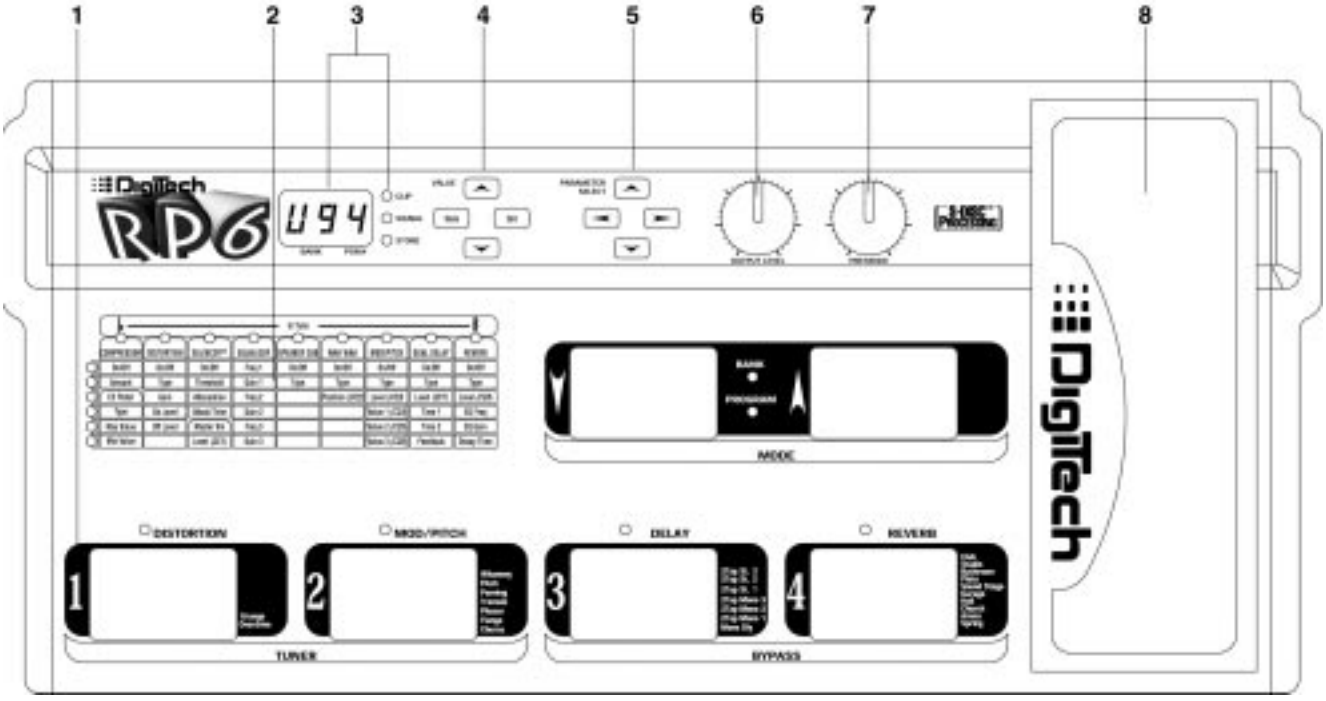
Line Conditioning - The RP-6, like any piece of computer hardware, is sensitive to voltage drops, spikes, and surges. Interference such as lightning or power "brownouts" can seriously, and in extreme cases, permanently damage the circuitry inside the unit. Here are some ways to avoid this type of damage:

- Spike/Surge Suppressors - This is an inexpensive solution to all but the most severe 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.

FRONT PANEL CONTROLS

The front panel controls and functions of the RP-6 are as follows (refer to diagram):



1) **Pedalboard** - The RP-6's pedalboard consists of six footswitches. The two Mode footswitches to the right of the Parameter Matrix allow you to change from Program mode to Bank mode by pressing the UP & DOWN footswitches simultaneously. When changing modes, the appropriate LED will light to indicate whether you are in Program mode or Bank Mode. In Program Mode, the <UP> and <DOWN> footswitches allow you to move through Programs, while the four main switches, labeled 1 - 4, act as toggle On/Off switches for Distortion, Modulation, Delay, and Reverb. In Bank mode, the <UP> and <DOWN> footswitches allow you to move through Banks, while the 1-4 footswitches are used to select Programs. If footswitches 1 and 2 are pressed simultaneously, Tuner Mode will be activated. If footswitches 3 and 4 are pressed simultaneously, Bypass Mode will be activated.

2) **Parameter Matrix** - The Parameter Matrix consists of a group of horizontal Effect LEDs and a second group of vertical Parameter LEDs. The Effect LEDs are: Compressor, Distortion, Silencer, Equalization, Speaker Cab, Wah Wah, Mod/Pitch, Dual Delay, and Reverb. This matrix shows you exactly what Effects and Parameters are in use.

3) **Display Window** - The display window shows all current operating and programming information and is comprised of two parts: the seven segment LED displays and the Signal, Clip, and Store indicator LEDs. The first numeric LED in the display window indicates whether you are in a User (U) or Factory Bank (F). The second indicates the Bank number currently in use, and the third indicates which Program number is currently in use. These numbers change as you scroll through the available Programs. The functions of the Signal, Clip, and Store indicator LEDs are as follows:

   - Signal - Indicates whether a signal is entering the RP-6.

   - Clip - Indicates analog clipping in the RP-6. Digital clipping can be detected when the third vertical LED from the top of the Parameter Matrix flashes. Distortion may be heard in the output signal if either analog or digital clipping occurs. If analog clipping occurs, check the Distortion On/Off levels. The levels may need to be lowered to eliminate the problem. To reduce digital clipping, the Master Volume and/or Effects levels should be checked and adjusted accordingly. As always, let your ears be the judge.

   - Store - Lights when a Parameter has been changed in a Program. When <STORE> is pressed once, the first seven segment LED in the Display window will flash. Once you have selected the Bank and Program location where you want to store your effects, press the <STORE> key again (see page 11, under Edit Mode for further information on storing a Program).

4) Value, Store and Edit Keys - The Value <UP> and <DOWN> keys allow you to scroll through the RP-6's Programs, or change Parameter values in Edit mode. The <STORE> key allows you to store an edited Program in memory for later use. The <EDIT> key allows you to edit the User and Factory Programs.

5) Parameter Select Keys -The <LEFT> and <RIGHT> Parameter keys allow you to navigate the horizontal Effect LEDs of the Parameter matrix. The <UP> and <DOWN> Parameter keys allow you to navigate the vertical Parameter LEDs of the Parameter matrix. These keys are only active in Edit mode.

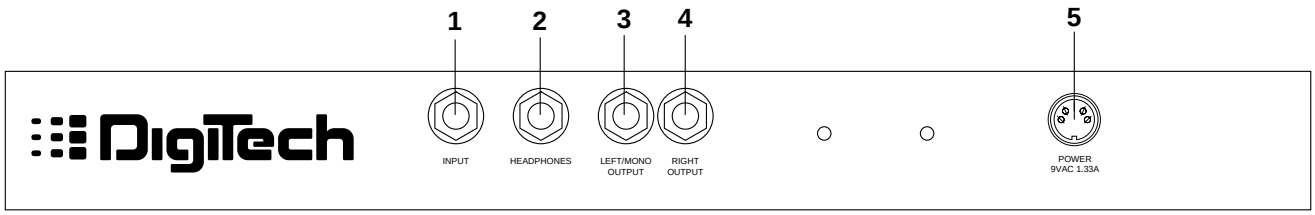
6) Output Level - Controls the overall output level of the RP-6. Also controls the overall level of the headphones.

7) Presence - Enhances the high frequency content of the overall sound. This will affect all presets.

8) Continuous Control Pedal - This volume-type pedal allows real-time control over Parameters in the RP-6.

REAR PANEL CONNECTIONS

The RP-6 rear panel connectors and functions are as follows:



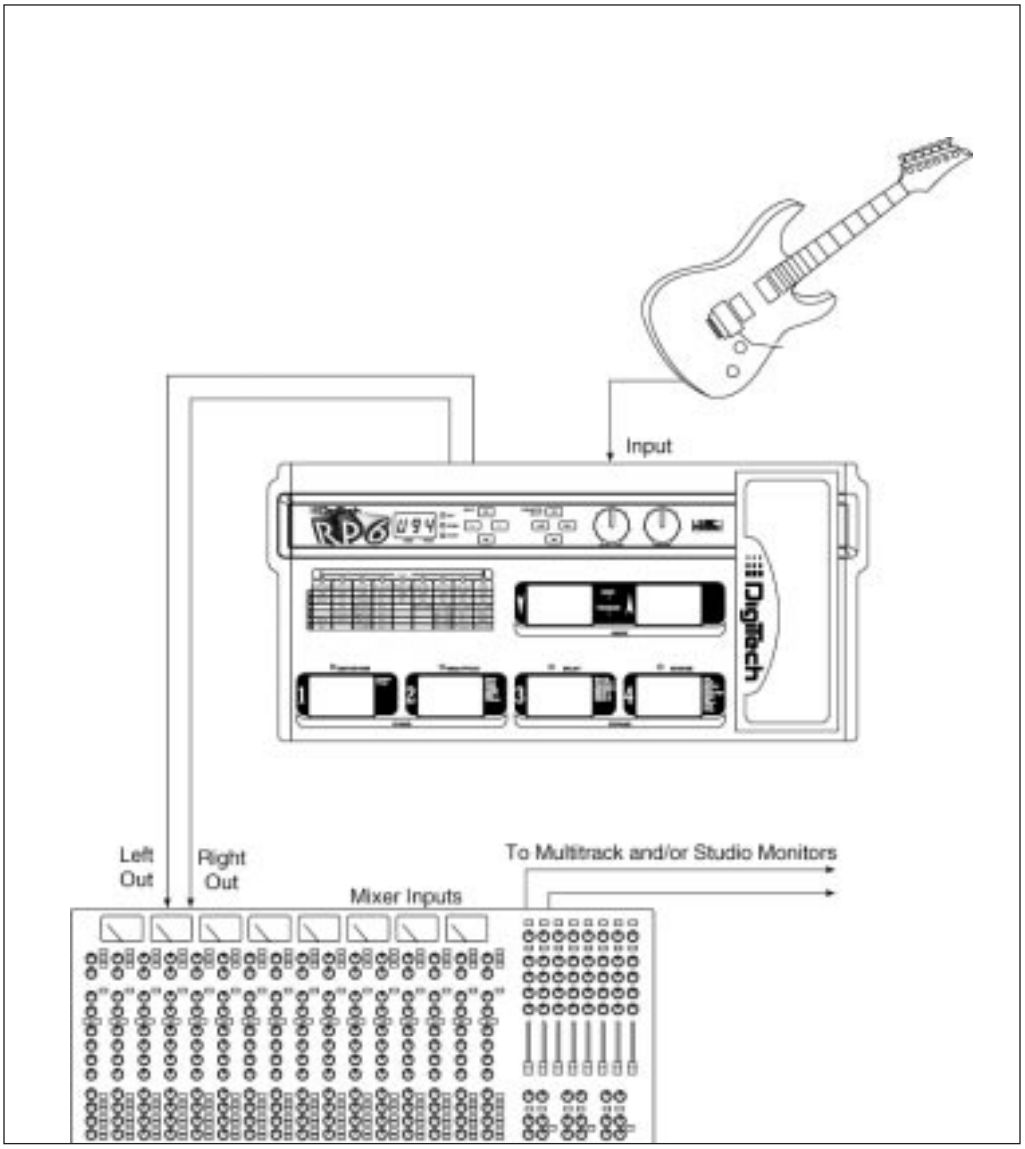
1) Input - This is the RP-6's audio input. Plug your guitar in here.

2) Headphone Output - 1/4" stereo plug for headphones. The headphone level is controlled by the main output level knob.

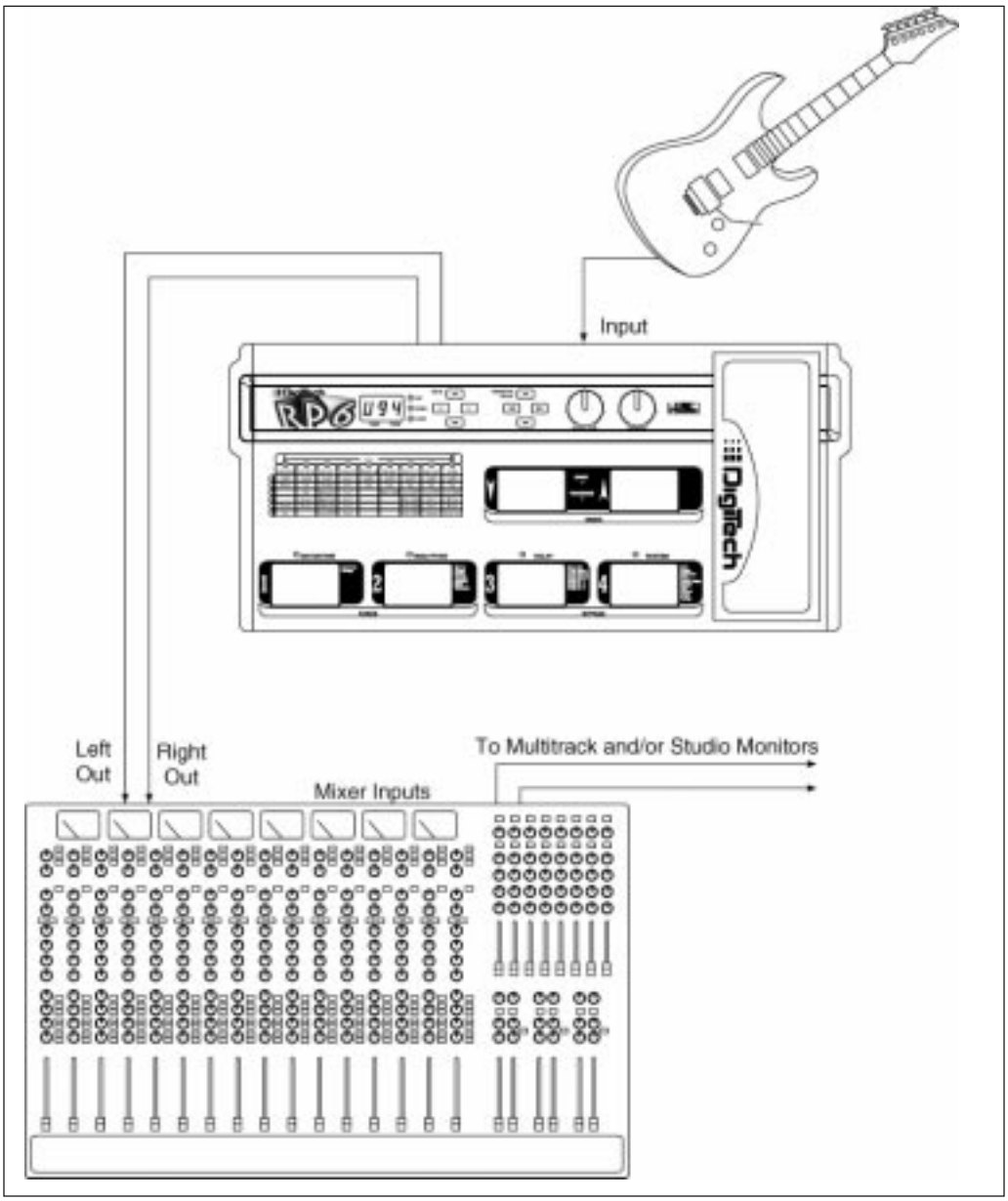
3) Left/Mono Main Output - This is the RP-6's left main audio output. This output must be used if a mono effect is desired.

4) Right Main Output - This is the RP-6's right main audio output. Use both left and right main outputs to take advantage of stereo effects.

5) AC Line Input - This is the AC adapter receptacle.



Basic Guitar Setup



Recording Setup (Use Cabinet Emulator)

SECTION 2 - BASIC OPERATIONS

ABOUT THE RP-6 MODES

The RP-6 offers five modes, allowing easy operation of the Effects and Parameters. The modes are as follows:

PROGRAM MODE

Allows you to scroll through the 40 Programs by using the <UP> and <DOWN> Value keys as well as the <UP> and <DOWN> footswitches. Enter Program mode by pressing the <UP> and <DOWN> footswitches simultaneously until the Program LED lights and a *P* appears briefly in the display window. Footswitches 1-4 act as on/off toggle switches for the specified effects. Exit Program mode by changing to another mode.

BANK MODE

Allows you to scroll quickly through Banks without going through every Program to get to the next Bank. Enter Bank mode by pressing the <UP> and <DOWN> footswitches simultaneously until the Bank LED lights and a *b* appears briefly in the display window. When you enter Bank mode, the Bank and Program numbers from the previous mode will be retained. When a Program number is displayed in the third LED of the display window, you can use the Value <UP> and <DOWN> keys to scroll through Programs and Banks. This works exactly like Program mode.

When the <UP> and <DOWN> footswitches are used in Bank mode, you will scroll through Banks only. When you change a Bank using this method, the previous Program number is not displayed with the new Bank. The LEDs above footswitches 1-4 will begin flashing, indicating that you can choose a Program in the selected Bank by pressing one of the four footswitches. Once a Program number has been selected, both the Bank and Program numbers will be displayed. Exit Bank mode by changing to another mode.

EDIT MODE

Allows you to change Effects and Parameters in a Program. Enter Edit mode by pressing the <EDIT> key. The Display window now shows the value of the Parameter indicated by the LEDs in the Matrix. You can scroll through the Parameter matrix using the Parameter Select keys. The <UP> and <DOWN> keys allow you to scroll through the vertical Parameter LEDs, while the <LEFT> and <RIGHT> keys allow you to scroll through the horizontal Effect LEDs.

After selecting a Parameter, you can scroll through its values with the <UP> and <DOWN> Data keys. When moving through Parameter values, the decimal point next to the Parameter value will flash when a stored value has been changed. If you return to the original value, the decimal point will stop flashing. If you exit Edit mode after changing the Parameters and then return to Edit mode, the last viewed Parameter will be displayed.

STORE MODE

Once you have modified the Parameters and Effects, you can store them to a user Program location. When you change an Effect or Parameter in a Program, the Store LED will light, indicating that you have changed a Parameter and need to store the changes. Press the <STORE> key once and the first seven segment LED in the Display window will flash U. Select the Program and Bank you want to store your changes to, and press the <STORE> key again to save the changes. Exit this mode by pressing any footswitch or Value key.

BYPASS MODE

Allows you to bypass the RP-6's Effects. Enter this mode by pressing footswitches 3 & 4 simultaneously. byP will appear in the display window to indicate you are in Bypass mode. Exit this mode by pressing any of the footswitches. When you exit this mode, the RP-6 will default to the last mode you used. Bypass is not available while in Edit mode.

TUNER MODE

Allows you to tune your guitar. Enter Tuner mode by pressing footswitches 1 & 2 simultaneously. tun will appear briefly in the display window followed by --- to indicate that you are in Tuner mode. To begin tuning play a note on your guitar (a harmonic at the 12th fret will work best). The display window will show the note being played and the horizontal Parameter Matrix LEDs just under the tuning bar will light. Once the LED directly under the IN TUNE of the tuning bar is lit, the note will be in tune. If the note is not in tune, 1 or 2 of the LEDs left or right of the IN TUNE LED will be lit. If they are to the left, the note is flat and should be tuned up. If the LEDs are to the right, the note is sharp and should tuned down. You can change your tuning preference by using the value <UP> and <DOWN> keys. The default factory setting is : A=440 Hz. The tuning reference control ranges from 427 Hz to 453 Hz, which is the equivalent of ± 50 cents (1/2 semitone) in either direction form 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 (370). The display window will briefly flash the currently selected tuning preference.

Exit this mode by pressing any of the footswitches. When you exit this mode, the RP-6 will default to the last mode you used. Tuner is disabled in Edit mode.

SECTION 3 - EFFECTS AND PARAMETERS

ABOUT THE PARAMETER MATRIX

The Parameter Matrix displays all the Effects and Parameters you can find in the RP-6. The Parameters are arranged in rows and columns. Use the Parameter Select keys to navigate the matrix. The Effects and their Parameters are as follows:

Compression

Parameters	Displayed Values
On/Off	OFF - ON
Threshold	LO - 1 . . . 78 - HI

The RP-6's Compression can be used to increase sustain and to tighten up guitars, and is particularly useful on clean sounds. Parameters of the RP-6 compressor are as follows:

On / Off.....Turns the Module on or off.

Amount .....Controls the amount of compression applied to the signal. Higher settings yield a tighter, more focused sound, while lower settings allow better dynamics. Ranges from 1-Lo to 78-Hi.

CC Pedal

Parameters	Displayed Values
Type	OFF . . . CC1 . . . CC8
Max Value	Parameter dependent
Min Value	Parameter dependent

The RP-6's CC Pedal allows you to control various Parameters of specific Effects with a Continuous Control Pedal.

Type .....There are eight Parameters that can be controlled by the CC Pedal. These Parameters are labeled with parenthesis in the Parameter Matrix, indicating which CC value controls that Parameter.

Max Value .....Sets the maximum value that the parameter assigned to the CC Pedal will reach when the Pedal is in the forward position. Range varies according to the parameter selected.

Min Value .....Sets the minimum value that the parameter assigned to the CC Pedal will reach when the Pedal is in the back position. Range varies according to the parameter selected.

Distortion

Parameters	Displayed Values
On/Off	OFF - ON
Type	odr - Gru
Gain	0.6 . . . 11.0
On Level	-oo . . . 12
Off Level	-oo . . . 12

The distortion section of the RP-6 has two extremely flexible distortion types, capable of producing the smoothest of the blues tones to the full shred gain of a cranked up stack.

On / Off.....Turns the Module on or off.

Type .....Selects the type of Distortion. Overdrive (odr) is a low to medium gain distortion, and Grunge (Gru) is an over the top high gain distortion.

Gain.....Controls the amount of distortion produced by the RP-6. High settings produce greater gain and drive for effortless soloing, while low settings offer better nuance and dynamic control. Ranges from 0.6 to 11.0.

On Level.....Sets the output level of the Distortion while the effect is ON. Ranges from -∞ to 12.

Off Level.....Sets the output level of the Distortion while the effect is OFF. Ranges from -∞ to 12.

Silencer

Parameters	Displayed Values
On/Off	OFF - ON
Threshold	LO - HI
Attenuation	0 . . . 100
Attack Time	0.00 . . .2.00

The RP-6's Silencer offers you a professional quality digital noise reduction effect.

On / Off.....Turns the Module on or off.

Threshold .....Sets the level at which the Silencer™ gate will open. Ranges are Lo and High.

Attenuation .....Sets the amount of attenuation (noise floor reduction) when the Silencer™ gate is closed. Varies from 100 dB (eliminates the signal completely) to 0 dB (no attenuation).

Attack Time .....Controls how fast the Silencer™ gate opens after detecting a signal above the threshold. Large numbers yield slower attack times, while small numbers give a fast attack. Varies from 0 to 2000 milliseconds (2 seconds).

Master Volume

Parameters	Displayed Values
Level (CC1)	0 . . . 100

The RP-6's Master Volume controls the overall volume level of the selected program. The level can be controlled with the CC 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.

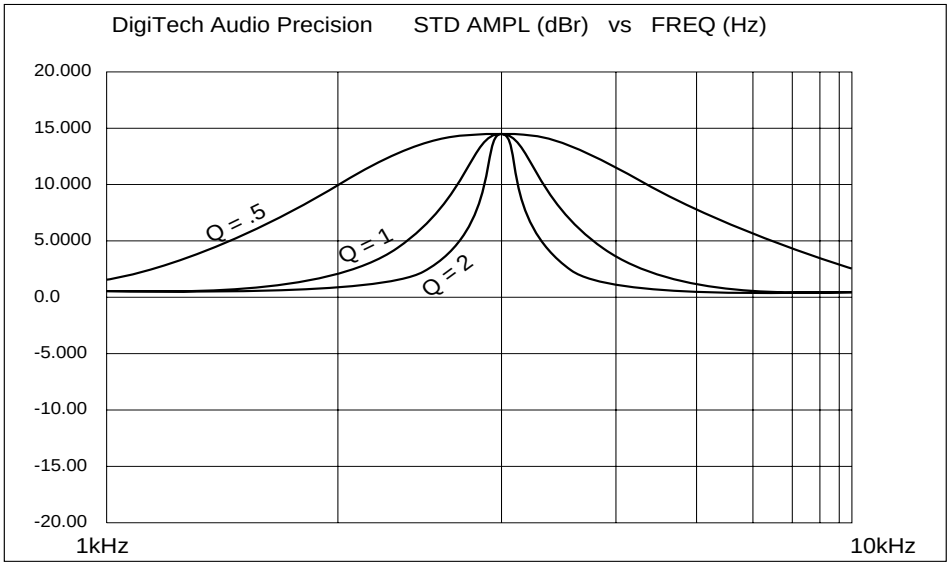
Level .....Controls the overall volume level. This can be done with the CC pedal or the Value keys. Variable from 0 to 100.

Equalization

Parameters	Displayed Values
Freq1 (Q= 0.5) kHz	0.02 . . . 16.0
Gain 1	- 15 . . .0 . . . 15
Freq 2 (Q= 1.0) kHz	0.02 . . . 16.0
Gain 2	- 15 . . .0 . . . 15
Freq 3 (Q= 2.0) kHz	0.13 . . . 16.0
Gain 3	- 15 . . .0 . . . 15

The RP-6 offers a three band parametric equalizer with preset Q's. The center frequency of each band is adjustable along with its gain (boost or cut).

High Q settings yield narrow bandwidth, where boost and cut have minimal effect on adjacent frequencies of the program material. Low Q settings affect a wider number of frequencies when the selected band is boosted or cut.



With a Q setting of .5 you can see from the diagram that a large number of frequencies are affected by boosting the center frequency. Now take a look at the middle and lower curves in the diagram, and notice the much narrower bandwidth of the curves with a Q setting of 1 and 2.

Frequency .....Allows you to select the center frequency of each band (refer to the diagram above). Ranges for frequencies 1 & 2 are .02 to 16.0 (20 Hz to 16 kHz). The Range for frequency 3 is 0.13 to 16.0 (130 Hz to 16 kHz).

Gain.....Allows you to boost and cut the frequency. Ranges are from -15 to 15.

Speaker Cab

Parameters	Displayed Values
On/Off	OFF - ON
Type	1 . . . 10

The RP-6's programmable Speaker Cabinet circuitry allows you to use it in both recording and live situations without lugging heavy amps and/or cabinets around. Just connect the RP-6 outputs to a mixing console and kick in the Speaker Cabinet. No miking hassles, no heavy equipment, just full on miked cabinet sound. Programs can be stored with different Speaker Cabinet settings so you can customize your Banks for whatever sound types you need. Parameters are as follows:

On / Off.....Turns the Module on or off.

Cabinet Type.....Selects the tonal characteristics of the simulated cabinet. There are 10 different cabinet types; 1-3 are warm cabinets, 4-6 are medium cabinets, 7-9 are bright cabinets, and 10 is a full bandwidth cabinet for maximum frequency response.

Wah Wah

Parameters	Displayed Values
On/Off	OFF - ON
Type	1 . . . 7
Position (CC2)	0 . . . 127

The RP-6 offers a classic wah wah effect, which can be used with or without Distortion for that classic Wah-Wah sound. The effect's position can be controlled with the CC Pedal.

On / Off.....Turns the Module on and off.

Type .....The Wah Wah types include; Classic 1-3, Dark & Deep 4, Mid Range 5, Full Range 6, and Brass Attack 7.

Position.....The PEDAL POSITION Parameter reflects the current setting of the continuous control device used to control the wah effect. This Parameter can be modified manually using the RP-6's Parameter keys to perform the wah function. As the Parameter is modified, the tone of the original note will change. Ranges 0 to 127.

Mod/Pitch

Parameters	Displayed Values						
On/Off	OFF - ON						
Type	CHO	FLA	PHA	trE	PAn	Pch	bnd
Level (CC3)	0 . . . 100	0 . . . 100	0 . . . 100	0 . . . 100	0 . . . 100	0 . . . 100	0 . . . 100
Value 1 (CC4)	Speed	Speed	Speed	Speed	Speed	Shift	Type
Value 2 (CC5)	Depth	Depth	Depth	Depth	Depth	Detune	Position
Value 3 (CC6)	Delay	Regen	Regen				

Is the RP-6's multi-function module, allowing you to select effects such as; Chorus, Flanger, Phaser, Tremolo, Panner, Pitch Shift, and Whammy™ effect. The Parameters of these effects are adjusted in this module.

On / Off.....Turns the Module on or off.

Type .....Allows you to select a specific type of modulation/pitch effect. The Types are; Chorus, Flanger, Phaser, Tremolo, Panning, Pitch Shifting, and Whammy (Bnd).

Level.....Controls the overall mix level of the mod or pitch shifting effect. Ranges from 0 to 100.

Values 1, 2, & 3.....Once you have selected the specific Type of effect you want, you can modify a specific value within that Type. (The values are only available when you are in the Type Parameter.)

CHO (Chorus)

Values 1,2,&3	Displayed Values
Speed	0 . . .100
Depth	0 . . .100
Delay	0 . . .100

The RP-6 offers a chorus that is unique in both character and sound. This dual chorus offers exceptionally rich chorusing using multiple voices with different phasing characteristics. Chorus Parameters are as follows:

Speed.....Controls the speed of the chorus sweep. Ranges from 0 to 100.

Depth.....This Parameter sets the sweep depth (intensity) of the chorus. Ranges from 0 to 100.

Delay .....Sets the amount of delay present in the chorus effect. Ranges from 0 to 100.

FLA (Flanger)

Values 1,2,&3	Displayed Values
Speed	0 . . .100
Depth (+Delay)	1 . . .16
Regeneration	-99 . . .0 . . .99

The RP-6 also offers exceptionally rich studio-quiet flanging. Flange Parameters are as follows:

Speed.....Controls the speed of the flange sweep. Ranges from 0 to 100.

Depth(+Delay).....Sets the depth amount and delay present in the flange effect. Ranges from 1 to 16.

Regeneration.....This Parameter sets the amount of regeneration which is perceived as the sweep depth (intensity) of the flange. Variable from -99 to 99.

PHA (Phaser)

Values 1,2,&3	Displayed Values
Speed	0 . . .100
Depth	0 . . .100
Regeneration	0 . . .99

The RP-6's classic adjustable phase shifting effect is reminiscent of mid-70's keyboard and guitar sounds.

Speed.....Controls the speed of the phase sweep. Ranges from 0 to 100

Depth.....Sets the sweep depth (intensity) of the phaser. Ranges from 0 to 100.

Regeneration.....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.

tr E (Tremolo)

Values 1,2,&3	Displayed Values
Speed	0 . . . 100
Depth	0 . . . 100
Not Available	

Tremolo was one of the first real effects, and appeared mostly on early guitar amplifiers. Because of this, tremolo is sometimes perceived as sounding "old" or "vintage". The RP-6, breathes new life into this classic effect, providing totally transparent volume modulation of sound sources.

Speed.....Controls the tremolo speed (speed of modulation). Ranges from 0 to 100.

Depth.....Adjusts the intensity of the tremolo effect. Ranges from 0 to 100.

PAn (Auto Panning)

Values 1,2,&3	Displayed Values
Speed	0 . . . 100
Depth	0 . . . 100
Not Available	

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:

Speed.....Controls the panning speed (speed of modulation). Ranges from 0 to 100

Depth.....Adjusts the intensity of the panning effect. Ranges from 0 to 100.

PCH (Pitch Shifting)

Values 1,2,&3	Displayed Values
Speed	-24 . . .0 . . .24
Depth	-99 . . .0 . . .99
Not Available	

This RP-6's Pitch Shifting effect gives you a shifted signal from 0 to 24 semi-tones above or below the pitch of the input signal.

Shift.....Sets the interval between the original note and the pitch shifted note. Variable from -24 to 24

Detune.....Determines the amount of detuning applied to the shifted note. Variable from -99 to 99.

bnd (Pitch Bending/Whammy)

Values 1,2,&3	Displayed Values
Type	1 . . . 16
Position	0 . . . 100
Not Available	

The RP-6's pitch bending effect allows you to smoothly shift between two preset pitch intervals using the CC Pedal.

Type.....Selects the function of the Whammy™ Module. There are 16 functions available in regular Whammy Modules. They are as follows:

1= Shallow Detune
2=Deep Detune
3=1 Octave Up
4=Up 2 Octaves
5=Down 2nd
6=Down 1 Octave
7=Down 2 Octaves
8=Down 6 Octaves
9=Major 2nd Up to Major 3rd Up
10=Minor 3rd Up to Major 3rd Up
11=Major 3rd Up to 4th Up
12=4th Up to 5th Up
13=5th Up to 6th Up
14=5th Up to Major 7th Up
15=4th Down to Minor 3rd Down
16=5th Down to 4th Down

Position.....The POSITION Parameter reflects the current setting of the Whammy™ effect. This Parameter should be linked to the RP-6's CC pedal. As Position is modified, the pitch of the original note will change in intervals according to the setting of the WHAMMY TYPE. Ranges from 0 to 100.

22 Dual Delay

Parameters	Displayed Values
On/Off	OFF-ON
Type	1...7
Level (Mix)	0...100
Delay 1	0...800
Delay 2	0...800
Feedback	0...99

Delay times 1 & 2 can be programmed independently. However, On/Off, Type, Level, and Feedback will program the same for BOTH Delays 1 & 2. For example, if you choose to program your Level to 50, both Delays 1 & 2 will be 50. Delay Parameters are as follows:

On / Off.....Turns the Effect on and off.

Type .....Determines the type of delay. Type 1 is a mono delay, Types 2 through 4 are two tap mono delays, and Types 5 through 7 are two tap stereo delays (see chart below for further information).

Type:	Left Output:	Right Output:	Feedback Source:
1	Delay 1	Delay 1	Delay 1
2	Delays 1 & 2	Delays 1 & 2	Delay 1
3	Delays 1 & 2	Delays 1 & 2	Delay 2
4	Delays 1 & 2	Delays 1 & 2	Delays 1 & 2
5	Delay 1	Delay 2	Delay 1
6	Delay 1	Delay 2	Delay 2
7	Delay 1	Delay 2	Delays 1 & 2

Level.....Controls the level of the delay in both Delay1 and Delay 2. Ranges from 0 to 100.

Delays 1 & 2.....The available delay time ranges are 0 (no delay) to 800 milliseconds.

Feedback .....The amount of time it takes for the Reverb to fade to inaudibility. Ranges from 0 to 99.

Reverb

Parameters	Displayed Values
On/Off	OFF - ON
Type	CLU . . .SPr
Level	0 . . .100
EQ Freq (kHz)	0.02 - 16.0
EQ Gain	- 15 . . .0 . . .15
Decay Time	1 . . .10

Ambience, or reverberation, is produced when sound energy is reflected off room surfaces and objects. Using reverberation 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 / Off.....Turns the Module on or off.

Type .....Allows you to choose your ambience or setting you want to use. There are ten available type settings:

SPr =Spring	StU=Studio
PLA=Plate	GAr =Garage
SOU=Sound Stage	HAL =Hall
bAt =Bathroom	CHU=Church
CLU=Club	ArE =Arena

Level.....Controls the amount of reverb signal to be mixed in with the dry signal. Ranges from 0 to 100.

EQ Frequency .....Adjusts the center frequency of the Reverb EQ. Varies from .02 to 16 kHz.

EQ Gain.....Allows you to increase and decrease the level of the EQ frequency. Varies from -15 to 15 dB.

Decay Time .....The amount of time it takes for the Reverb to fade to inaudibility. Ranges from 1 to 10.

SECTION 4 - APPENDIX

REINITIALIZING THE RP-6

This option allows you to restore the contents of the RP-6's memory to the original factory condition.

WARNING: Performing this function will destroy all user-programmed data. All such data will be lost forever!

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

- Plug in the RP-6 while holding down the Parameter Select <UP> key.
- When rSt appears in the display window, press the Value <UP> key.

SPECIFICATIONS

A/D Converter: 16 bit PCM
D/A Converter: 16 bit PCM
Sampling Frequency: 40 kHz

DSP Section:

Architecture: Static-Dynamic Instruction Set Computer (S-DISC™)
Digital Signal Path Width: 24 bits (144.5 dB)
Internal Data Path Width: 48 bits (289 dB)
Dynamic Delay Memory: 64k x 24 bits (1.68 seconds)
Static Delay Memory: 256 24-bit registers (6.55 milliseconds)
Data ALU Processing: 10.0 MIPS
Address ALU Processing: 15.0 MIPS
Multiplier Size: 24 bits x 24 bits

Input Section:

Connector: 1/4" Unbalanced TRS
Nominal Level: -8 dBu
Maximum Level: +10 dBu
Impedance: 470 kohms

Output Section:

Connector: 1/4" TRS
Nominal Level: +4 dBu
Maximum Level: +18 dBu
Impedance: 50 ohms

General:

Frequency Response: 20 Hz. - 20 kHz. +0, -3 dB
S/N ratio: Greater than 90 dB; ref = max signal, 22 kHz measurement bandwidth
Total Harmonic Distortion: Less than 0.04% (1 kHz.)
Memory Capacity:
- Factory: 40 Programs
- User: 40 Programs

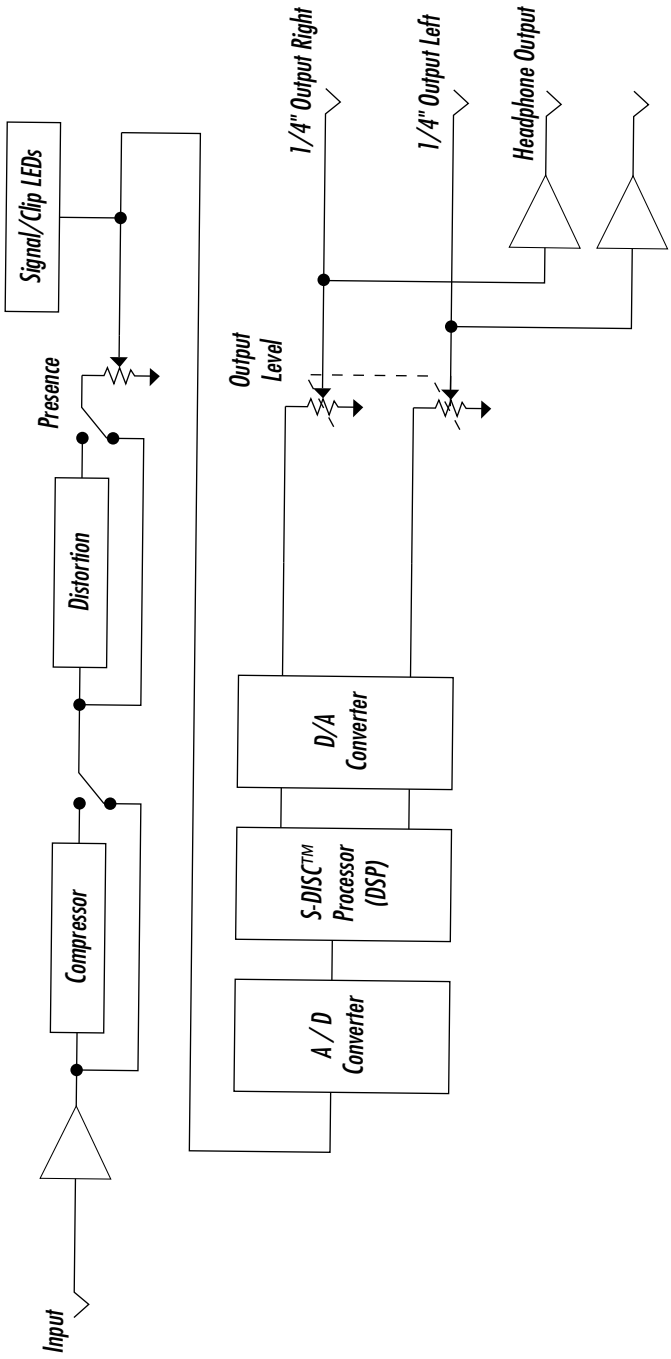
Power Requirements:
- US and Canada: 120 V AC, 60 Hz
- Japan: 100 V AC, 50/60 Hz
- Europe: 230 V AC, 50 Hz
- UK: 240 V AC, 50 Hz

Power Consumption: 12 watts
Dimensions: Legnth 18" Width 8.75" Height 2.75"

26

BLOCK DIAGRAM

Following is a simplified block diagram of the RP-6.



PRESET LIST

Following is a list of all the factory Programs in the RP-6.

Rock	#	Title
	01	Big Easy
	02	Chorus Church
	03	Tap Delay/Chorus
	04	Rock Wah/Delay
Pop		
	11	Flange Rhythm
	12	12 String
	13	Roto Phase Delay
	14	Octave Down Wah
Heavy		
	21	Bone Crusher
	22	Metal Rhythm
	23	Clean Delay/Reverb
	24	Meat Man
Alternative		
	31	Clean Wah
	32	Fat Dirt Chorus
	33	Clean Flange/Verb
	34	Trem-O-Rhythm
Post Seattle		
	41	Fuzz Box
	42	Grungy
	43	Oct Up Whammy
	44	Slow Phase Lead

Country	#	Title
	51	Clean Slapback
	52	Dirty Rhythm
	53	Spaghetti Western
	54	Pedal Steel (CC Pedal)
Retro		
	61	Pedal Phase
	62	Surf King
	63	Dirt Box
	64	Transistor Distortion
Jazz/Fusion		
	71	Fusion Solo
	72	Clean Jazz
	73	Grit With Delay
	74	Compressed Chorus
Blues		
	81	Bluesy Delay
	82	Texas Blues
	83	Blues Slide (CC Treadle)
	84	Sparkley Clean
Special		
	91	Distortion Swell
	92	Tape Machine
	93	5th Above
	94	Wah Wah Man

8760 South Sandy Parkway
Sandy, Utah, 84070

Telephone (801) 566-8800
FAX (801) 566-7005

International Distribution: 7 Farmington Road
Amherst, New Hampshire 03031 U.S.A.
FAX (603) 672-4246

Printed In U.SA 2/96
Manufactured in the U.S.A.

RP-6 18-2151-A
Revised 3/30/96

OS v1.00

This manual
is made from
recycled
materials.