Preset Chart Amendments

PRO Q™

PROGRAMMABLE GUITAR ENHANCEMENT SYSTEM

OWNER'S MANUAL

HUSH™ licensed by HUSH SYSTEMS

ROCKTRON
GUITAR RACK TECHNOLOGY

Table of Contents

1. INTRODUCTION

The Rocktron Pro Q™ is a MIDI programmable true - stereo guitar enhancement system designed to give your existing system an added dimension of tonal variation.

The unit offers a boost of up to 25dBu at carefully selected low and high band frequencies in each channel, along with a notch/boost feature in which both the notch depth/peak boost levels and frequencies are user selectable for each channel over a wide range. A mix level control is also provided for each.

In addition, a phase control feature for each channel (also with mix level control) allows for even greater tonal variation while individual HUSH™ noise reduction circuits (with user selectable threshold controls) ensure quiet operation of not only the Pro Q™ but will also reduce extraneous noise from preamps and other effects routed prior to the Pro Q™ in the signal chain.

PRECAUTIONS

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

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

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

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

POWER REQUIREMENTS

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

OPERATING TEMPERATURE

Do not expose this unit to excessive heat. This unit is designed to operate between 32F and 104F (0C and 40C). This unit may not function properly under extreme temperatures.

2. FRONT PANEL OPERATION
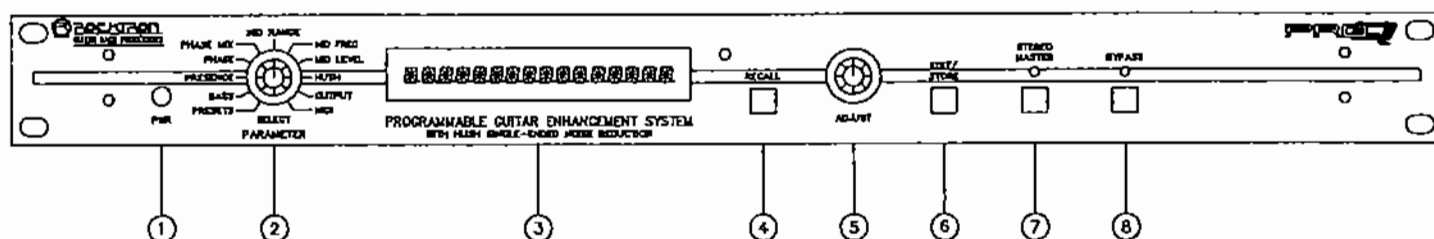
(1)...POWER SWITCH

(2)...SELECT PARAMETER CONTROL:

20 positions (Preset function, 18 adjustable parameters and MIDI options) full counter-clockwise to full clockwise.

> ### A. Preset Function:
> PRESET: preset number and title, 128 total presets available [20 factory presets (#109-#128), 108 fully adjustable presets (#1-#108)].

> ### B. Adjustable Parameters:
> (L) BASS: Low frequency boost from 0dB to 25dB @170Hz for the left channel. Adjustable from 0 to 100.
> (L) PRESENCE: High frequency boost from 0dB to 25dB @6.5KHz for the left channel. Adjustable from 0 to 100.
> (L) PHASE: Adjusts phase manipulation circuit for the left channel. Adjustable from 0 to 100.
> (L) PHASE MIX: Selects mix ratio of phased signal with direct signal from 0% to 100% for the left channel. Adjustable from 0 to 100.
> (L) MID RANGE: Selects mode of operation for mid band enhancement in the left channel. Frequency notch or boost may be selected.
> (L) MID FREQ: Selects the mid band frequency to be notched or boosted in the left channel. Adjustable from 80Hz to 10KHz.
> (L) MID LEVEL: Selects the degree to which the desired frequency of the mid band is notched or boosted in the left channel. Adjustable from 0 to 100.
> (L) HUSH: Selects the threshold level for the filter and expander circuits of the HUSH™ noise reduction for the left channel. Adjustable from -70dB to 0dB.
> (L) OUTPUT: Selects the output level of the left channel. Adjustable from 0 to 100.

Continue moving the SELECT PARAMETER control in a clockwise fashion and the above parameters will be repeated for the right channel.

> ### C. MIDI Options:
> This is the most clockwise position of the SELECT PARAMETER control and allows access to the MIDI parameters (mapping status, program mapping, controller mapping and MIDI channel).

(3)...DISPLAY PANEL:

The display panel consists of 16 characters. Each character consists of 14 segments. On initial power up, the display will show a brief segment test. All segments are lit at this time, indicating that all are operating properly.

(4)...RECALL BUTTON:

The RECALL button's function is dependant on the position of the SELECT PARAMETER control.

When the SELECT PARAMETER control is in "PRESET", the RECALL button is used to recall the displayed preset number.

When the SELECT PARAMETER control is in any one of the adjustable parameters (Bass, Presence, Phase, etc.), the RECALL button is used to toggle between a stored parameter value and an altered value.

When the SELECT PARAMETER control is in "MIDI", the RECALL button is used to step through the MIDI options.

(5)...ADJUST CONTROL:

The function of the ADJUST control is dependant on the position of the SELECT PARAMETER control.

When the SELECT PARAMETER control is in "PRESET", the ADJUST control is used both to select a preset number and edit preset titles.

When the SELECT PARAMETER control is in one of the adjustable parameters, the ADJUST control allows the user to select the different values available for each parameter.

When the SELECT PARAMETER control is in "MIDI", the ADJUST control selects the various choices within the MIDI options.

(6)...EDIT/STORE BUTTON:

The function of the EDIT/STORE button is dependant on the position of the SELECT PARAMETER control.

When the SELECT PARAMETER control is in "PRESET", the EDIT/STORE button is used to initiate the title edit function. All 128 titles can be edited to whatever the user prefers (including the factory presets).

When the SELECT PARAMETER control is in one of the adjustable parameters, the EDIT/STORE button is used to copy a preset into another preset, or store any changes made into the same preset number (Factory presets cannot be copied over).

When the SELECT PARAMETER control is in "MIDI", the EDIT/STORE button is used to store MIDI information after entering it into the Pro Q™.

(7)...STEREO MASTER BUTTON & LED:

The STEREO MASTER feature allows for both the left and right channels to be controlled by the settings made in the left channel's parameters, giving an identical signal from both the left and right output jacks. When the STEREO MASTER LED is lit, the right channel's parameters are inoperative. The STEREO MASTER is also programmable for each preset.

(8)...BYPASS BUTTON & LED:

The BYPASS button allows the user to bypass the Pro Q™ (the output signal identical to the input signal). When the LED is lit, the unit is bypassed. This button is a *master* bypass and should not be confused with the bypass *preset* programmed into the unit.

3. REAR PANEL DESCRIPTION
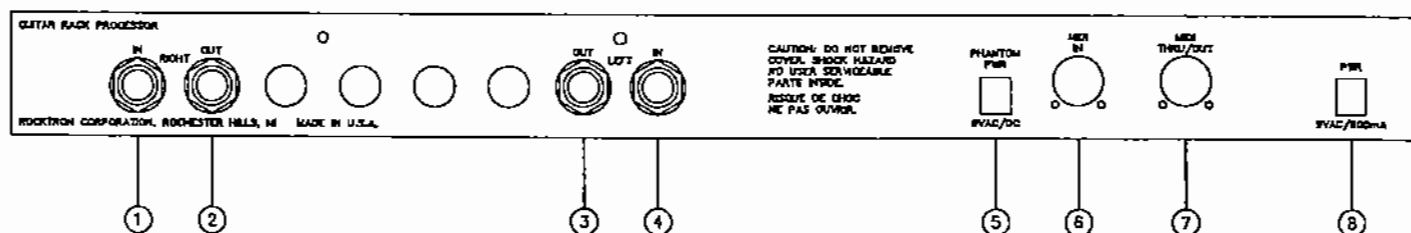
(1)...RIGHT CHANNEL IN JACK:

This standard 1/4" mono jack provides input to the right channel when using two inputs. Read the Specifications section to determine the maximum input level that the Pro Q™ can accept. Failure to do so may result in damage to the unit.

(2)...RIGHT CHANNEL OUT JACK:

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

(3)...LEFT CHANNEL OUT JACK:

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

(4)..LEFT CHANNEL IN JACK:

This standard 1/4" mono jack provides input to the left channel when using two inputs. When using only one input, use this jack to provide input to both the left and right channels. Read the Specifications section to determine the maximum input level that the Pro Q™ can accept. Failure to do so may result in damage to the unit.

(5)...PHANTOM POWER JACK:

This jack offers the ability to power the Rocktron MIDI Mate Foot Controller from the 7 pin MIDI cable which connects from the MIDI Mate to the "MIDI In" jack on the rear panel of the Pro Q™, eliminating the need to find an AC outlet near where the footpedal would be placed during a performance, or the need to run an extension cord out to the MIDI Mate. Instead of inserting the adaptor into the MIDI Mate "POWER" jack, plug it into the "PHANTOM POWER" jack on the Pro Q™. This will power the MIDI Mate through pins 6 and 7 of the MIDI cable connecting the two units. A 7 pin MIDI cable must be used.

(6)...MIDI IN JACK:

This 7 pin DIN connector receives MIDI information from the device which is transmitting the MIDI commands for the Pro Q™ to execute. This information can be passed on to other MIDI devices by using the "MIDI THRU/OUT" jack.

(7)...MIDI THRU/OUT JACK:

This standard 5 pin DIN connector passes on the MIDI information that is received at the MIDI In jack to other MIDI compatible devices via a MIDI cable.

(8)...POWER JACK:

Accepts power from the 9VAC adaptor supplied with the unit. See the Power Requirements section for further explanation.

4. OPERATION

A. Power Up

When the Pro Q™ is initially powered on, the display will show a brief segment test. All display segments are lit briefly indicating that all segments are working. After this test is completed the display will scroll "ROCKTRON PRO Q" until any knob is turned or any button is pressed.

"PRESET" is a particular position of the SELECT PARAMETER control (set fully counter clockwise). There are 128 preset numbers available to recall. Initially, factory presets #109 - #128 are repeated through the remaining memory locations (#1 - #108).

Each preset stores a selected value for each of the adjustable parameters. These parameter values stored in each preset will determine how each preset will sound.

B. Recalling a Stored Preset

STEP 1: To recall a particular preset, turn the SELECT PARAMETER control fully counter clockwise. This position is "PRESET". The unit will display the current preset number and title.

1. TURN COUNTER CLOCKWISE TO "PRESETS".
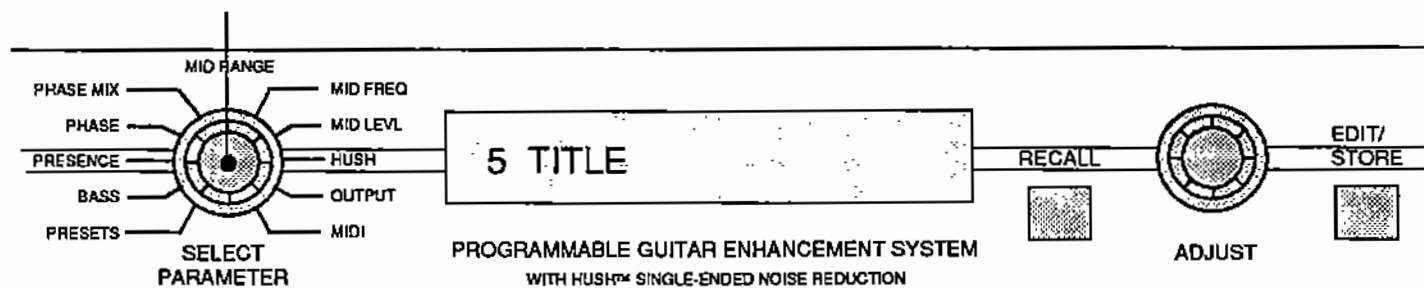
STEP 2: To change to a different preset than what is currently being displayed, turn the ADJUST control until the number of the desired preset is displayed. The display will alternate between "PRESS RECALL FOR" and the desired preset number/title.

1. TURN TO DESIRED PRESET.

2. DISPLAY SHOWS "PRESS TO RECALL" AND NEW PRESET NUMBER/TITLE ALTERNATELY.

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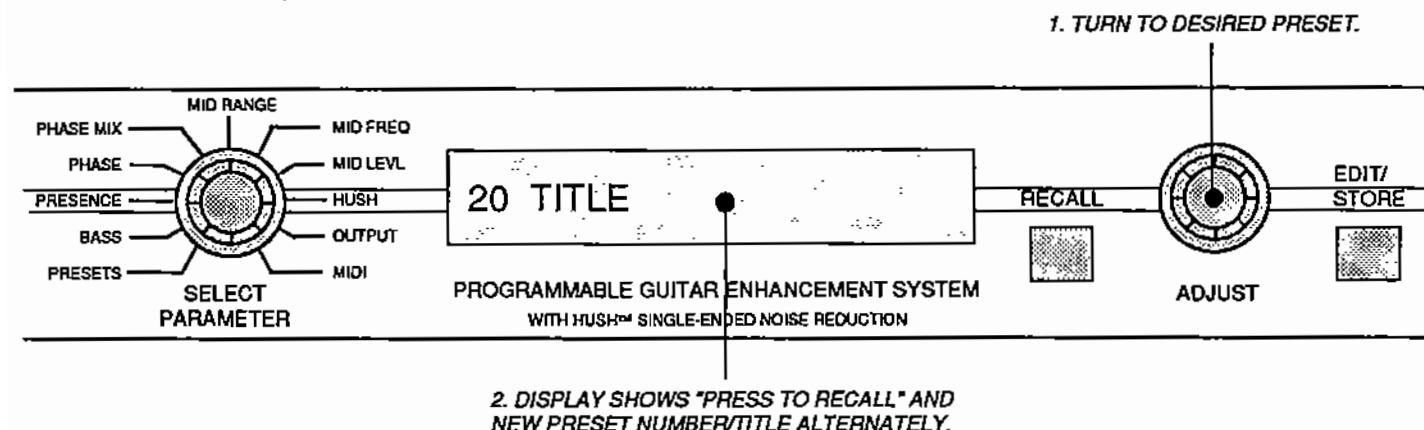
STEP 3: Pressing the RECALL button will change the preset to the new preset number. Until the RECALL button is pressed, no change in preset will take place.

2. DISPLAY SHOWS NEW PRESET NUMBER/TITLE.

PHASE MIX · MID RANGE · MID FREQ
PHASE · · MID LEVL
PRESENCE · · HUSH
BASS · · OUTPUT
PRESETS · · MIDI
SELECT PARAMETER

20 TITLE

RECALL

ADJUST

EDIT/ STORE

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WITH HUSH™ SINGLE-ENDED NOISE REDUCTION

1. PRESS TO RECALL DESIRED PRESET.

NOTE: To cancel the RECALL mode, either turn the ADJUST control back to the original preset number, or turn the SELECT PARAMETER control clockwise into another setting. No change will take place as long as the RECALL button has not been pressed.

1. TURN EITHER DIRECTION   *OR*   *TURN BACK TO ORIGINAL PRESET*

PHASE MIX · MID RANGE · MID FREQ
PHASE · · MID LEVL
PRESENCE · · HUSH
BASS · · OUTPUT
PRESETS · · MIDI
SELECT PARAMETER
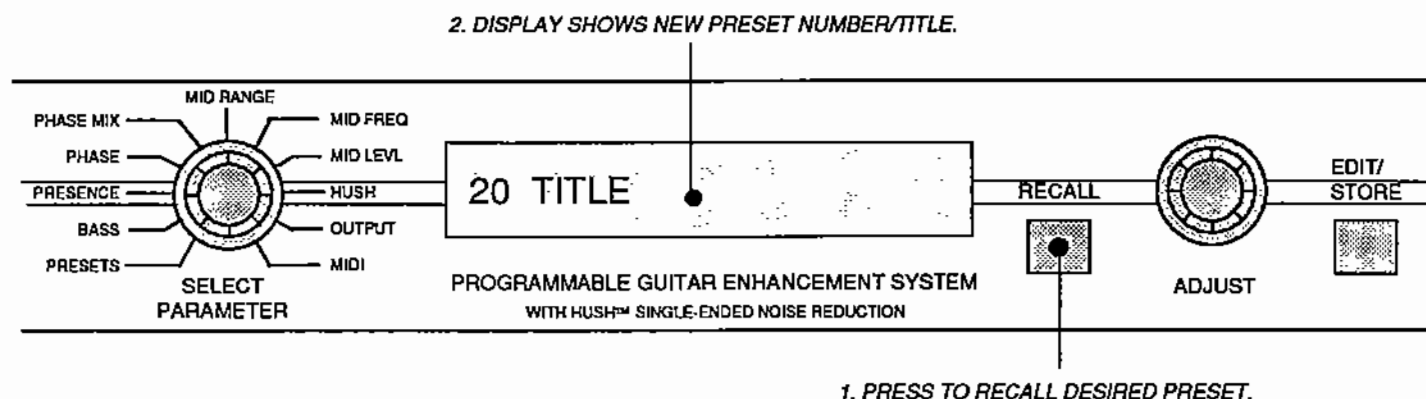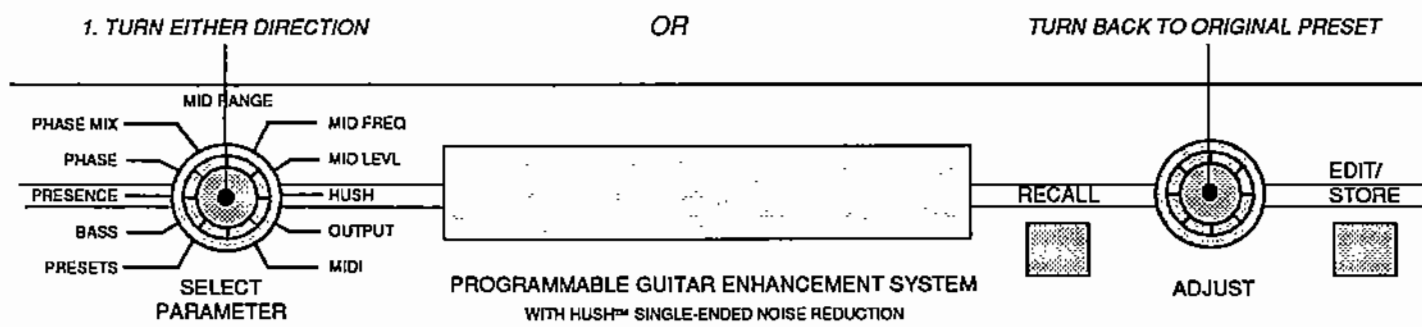
RECALL

ADJUST

EDIT/ STORE

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WITH HUSH™ SINGLE-ENDED NOISE REDUCTION

C. Changing Adjustable Parameter Values

STEP 1: One position clockwise of "PRESET" is the first of the next nine positions of the SELECT PARAMETER control that are adjustable parameters for the left channel of the Pro Q™. Each of these parameters are displayed when the SELECT PARAMETER control is turned to it's position.

1. TURN CLOCKWISE FROM "PRESETS" POSITION TO ADJUSTABLE PARAMETERS.

PHASE MIX · MID RANGE · MID FREQ
PHASE · · MID LEVL
PRESENCE · · HUSH
BASS · · OUTPUT
PRESETS · · MIDI
SELECT PARAMETER

(L) BASS   25

RECALL

ADJUST

EDIT/ STORE

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WITH HUSH™ SINGLE-ENDED NOISE REDUCTION
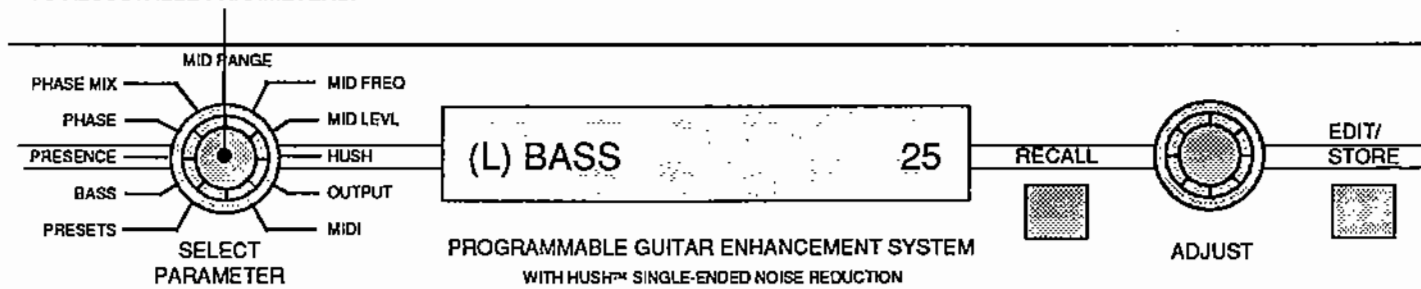
STEP 2: Upon turning the SELECT PARAMETER control to the parameter you wish to change, the displayed value will be immediately modified by turning the ADJUST control to the desired new value. As soon as the parameter value has been changed from the stored value, the ALTERED INDICATOR will light. The ALTERED INDICATOR is the decimal point of the first character of the display, it will light whenever the parameter value shown has been changed to any value other than the value stored for that parameter in that preset.

2. ALTERED INDICATOR LIGHTS

1. TURN TO MODIFY PARAMETER VALUE
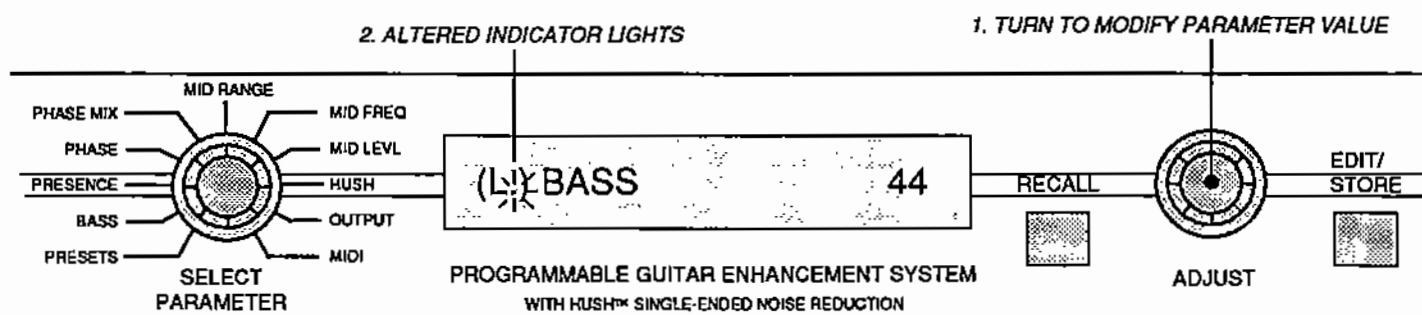
STEP 3: To immediately return to the stored value in the preset, press the RECALL button. The RECALL button will allow the Pro Q™ to alternate between the currently stored value and an adjusted value. This allows the user to compare the two values with the touch of a button. All the adjustable parameters can be modified and compared in this manner.

1. PRESS RECALL TO COMPARE SOUND OF OLD VALUE TO NEW VALUE.
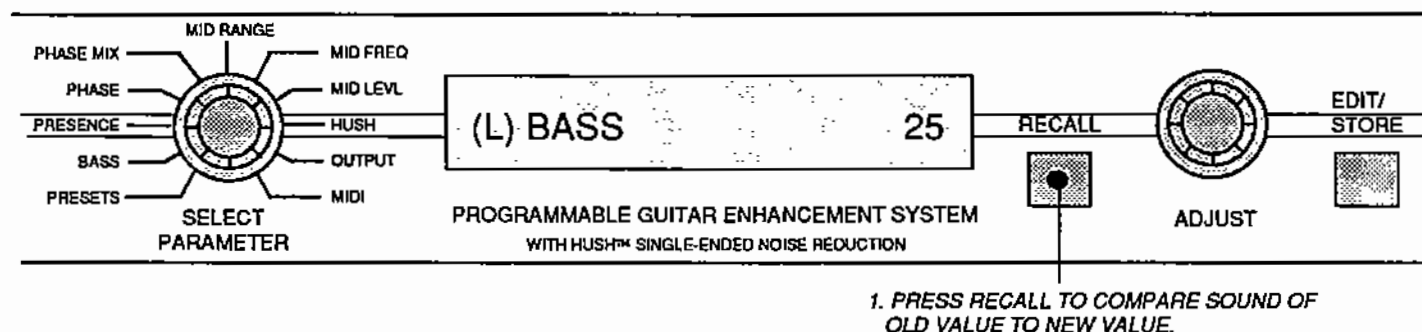
D. Storing Presets

STEP 1: To store changes made to a preset's parameters (including the Stereo Master), press the EDIT/STORE button while in any one of the adjustable parameters to initiate the copy mode. "STORE TO PRESET" and the current preset number/title will flash alternately on the display.

2. DISPLAY FLASHES "STORE TO PRESET" AND CURRENT PRESET NUMBER/TITLE ALTERNATELY

1. PRESS TO START STORE PROCEDURE
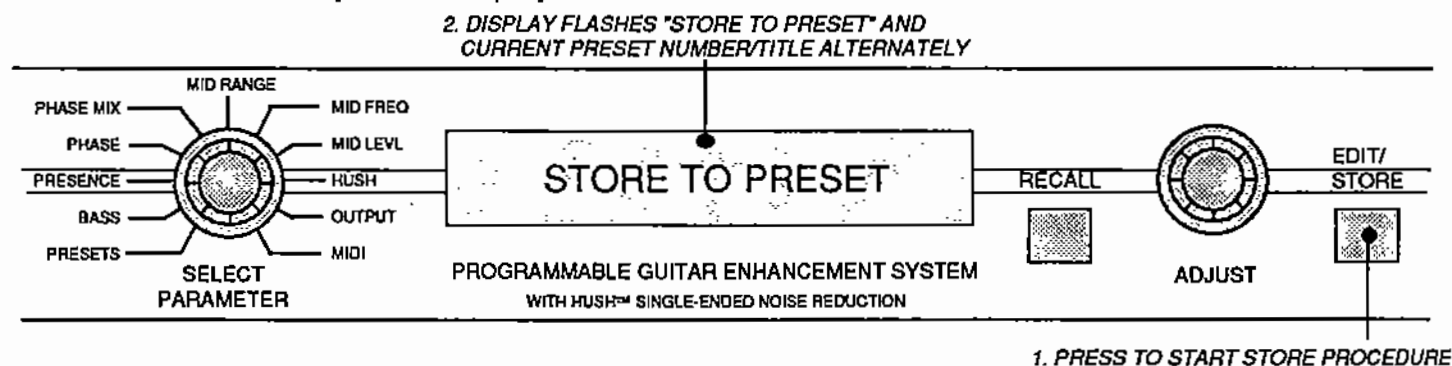
NOTE: If the current preset is one of the factory presets (#109-#128), the target preset will default to preset #108.

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STEP 2: Turn the ADJUST control to the desired preset number which the new preset is to be stored into. The display will now alternate between "STORE TO PRESET" and the new preset number/title.

1. TURN TO SELECT PRESET TO STORE INTO.

STORE TO PRESET

2. DISPLAY FLASHES "STORE TO PRESET" AND NEW PRESET NUMBER/TITLE ALTERNATELY.
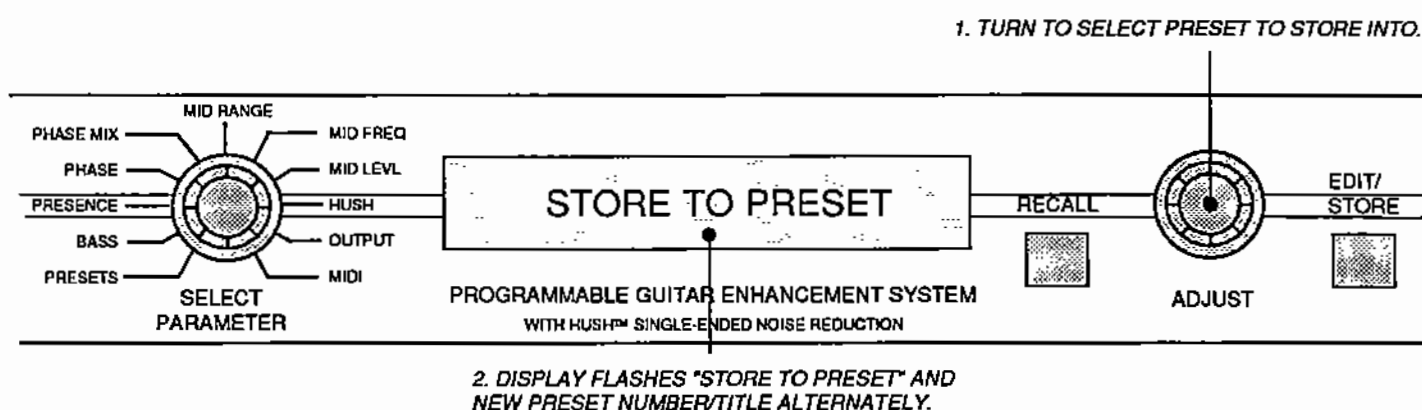
STEP 3: Press the EDIT/STORE button to store the new preset into the new preset number. Once pressed the display will flash "STORED" briefly, indicating that the current parameters were successfully stored into the new preset.

2. DISPLAY FLASHES "STORED" BRIEFLY, THEN SHOWS NEW PRESET NUMBER/TITLE.

STORED

1. PRESS TO STORE SETTINGS INTO FLASHING PRESET.
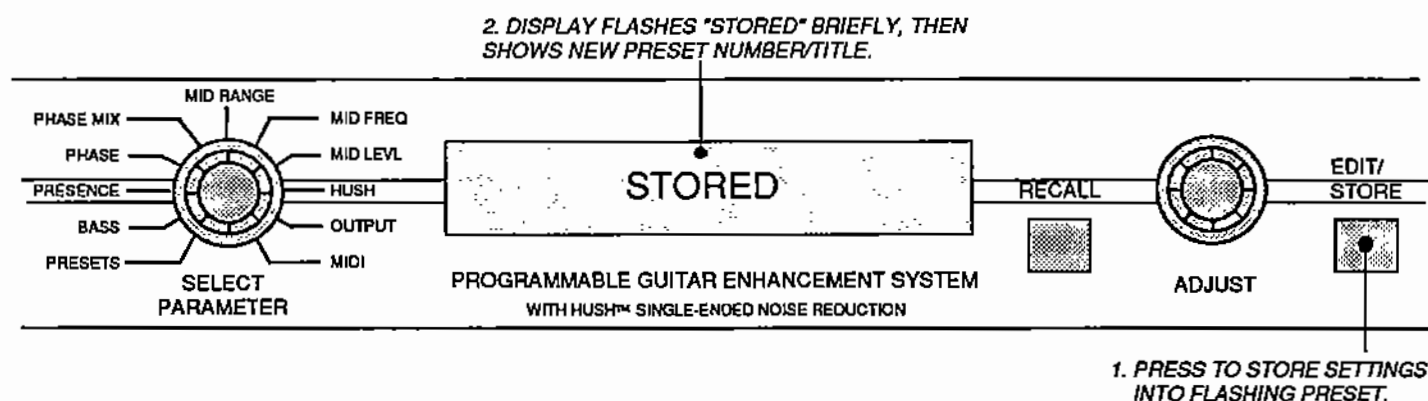
STEP 4: When storing into a new preset number, the Pro Q™ allows you to select whether or not to copy the title of the preset you are copying from. To copy the title, press the EDIT/STORE button. If this is not desired, turn the SELECT PARAMETER control to exit.

COPY TITLE TOO?

1. TURN TO EXIT STORE PROCEDURE   *OR*   *3 PRESS TO COPY TITLE.*
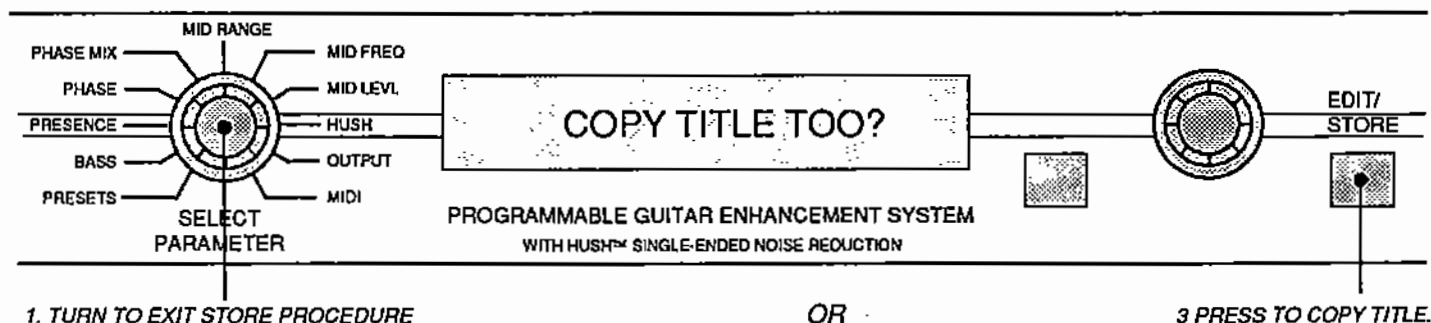
NOTE 1: To cancel the store mode once it has been initiated, turn the SELECT PARAMETER control in either direction. The display will briefly flash "CANCEL" and the Pro Q™ will return to it's original state before the store mode was initiated.

1. TO EITHER DIRECTION TO CANCEL BEFORE STORING.

MID RANGE
PHASE MIX — — MID FREQ
PHASE — — MID LEVL
PRESENCE — — HUSH
BASS — — OUTPUT
PRESETS — — MIDI

CANCEL

RECALL

EDIT/
STORE

ADJUST

SELECT
PARAMETER

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WITH HUSH™ SINGLE-ENDED NOISE REDUCTION

2. DISPLAY FLASHES "CANCEL" BRIEFLY.

NOTE 2: Factory presets #109-#128 can not be copied over.

NOTE 3: The Stereo Master will also be stored with each preset by following this procedure.
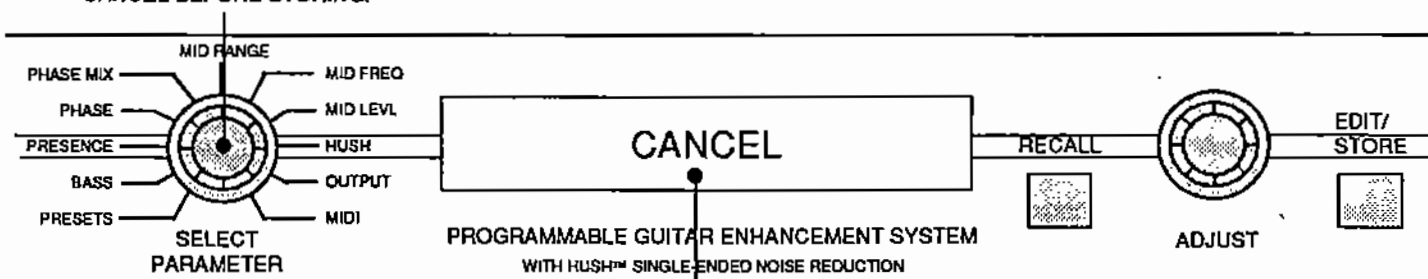
E. Selecting a "Power On" Preset

The Pro Q™ can be programmed to recall a particular preset when the unit is turned on.

STEP 1: Recall the desired "Power On" preset.

1. TURN TO "PRESETS".   *2. SELECT DESIRED "POWER ON" PRESET.*

MID RANGE
PHASE MIX — — MID FREQ
PHASE — — MID LEVL
PRESENCE — — HUSH
BASS — — OUTPUT
PRESETS — — MIDI

14 TITLE

RECALL

EDIT/
STORE

ADJUST

SELECT
PARAMETER

PROGRAMMABLE GUITAR ENHANCEMENT SYSTEM
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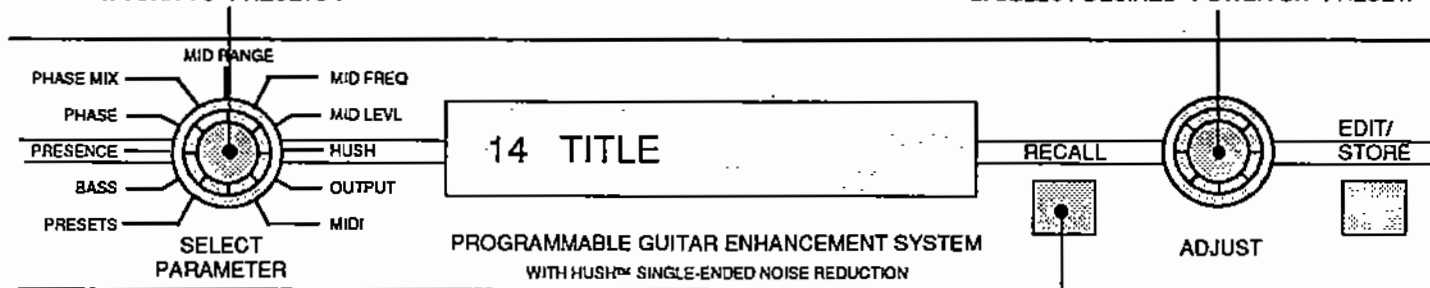
3. PRESS "RECALL"

STEP 2: Turn the SELECT control fully clockwise to the MIDI position.

1. TURN FULL CLOCKWISE TO MIDI.

MID RANGE
PHASE MIX — — MID FREQ
PHASE — — MID LEVL
PRESENCE — — HUSH
BASS — — OUTPUT
PRESETS — — MIDI

MIDI

RECALL

EDIT/
STORE

ADJUST

SELECT
PARAMETER

PROGRAMMABLE GUITAR ENHANCEMENT SYSTEM
WITH HUSH™ SINGLE-ENDED NOISE REDUCTION
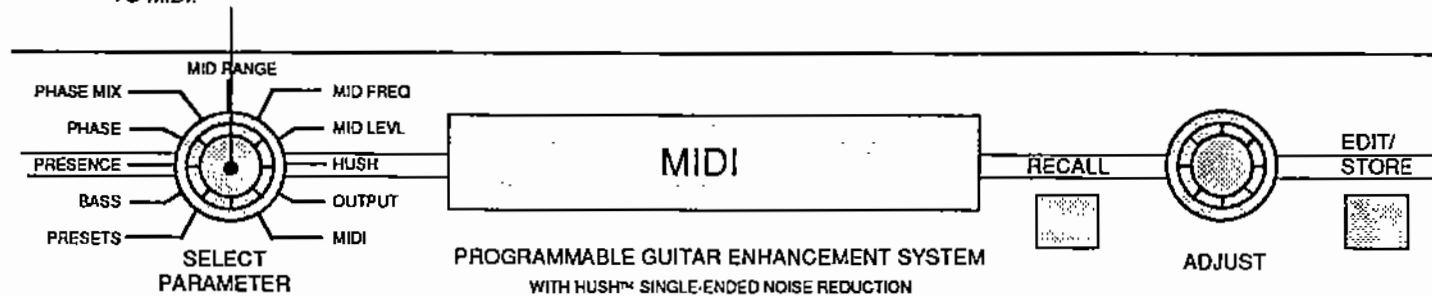
STEP 3: Press the EDIT/STORE button. "STORED" will flash briefly to show that the "Power On" preset was correctly stored.
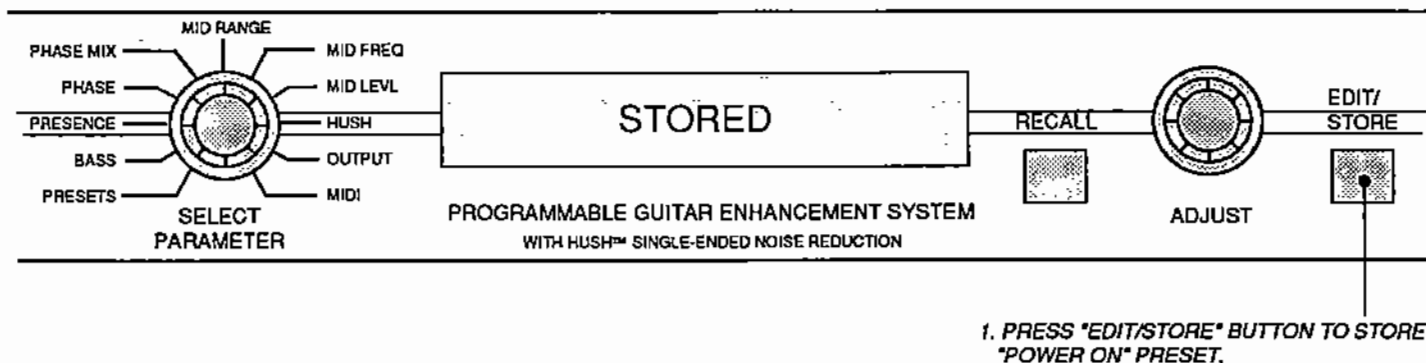
Now each time you turn on the Pro Q™, the stored "Power On" preset will be recalled.

F. Editing a Preset Title

STEP 1: All 128 preset titles can be modified. To edit the title of a given preset, that preset must first be recalled. While the title of the preset is being displayed (in "PRESET" position), pressing the EDIT/STORE button will initiate the title edit mode. The first character of the title will begin flashing, indicating that character may now be changed.

1. TURN TO "PRESETS"

3. DISPLAY SHOWS FIRST CHARACTER OF TITLE FLASHING.

2. PRESS TO BEGIN TITLE EDIT FUNCTION.
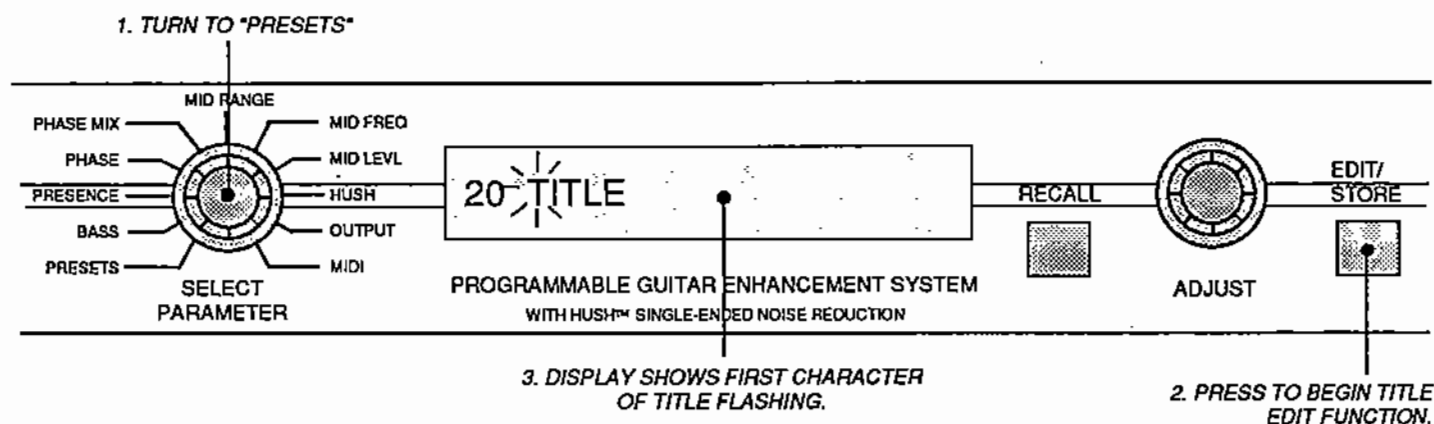
STEP 2: Turn the ADJUST control to change the first character of the title.

1. TURN TO SELECT DESIRED FIRST CHARACTER

2. FIRST CHARACTER IS NOW ALTERED.
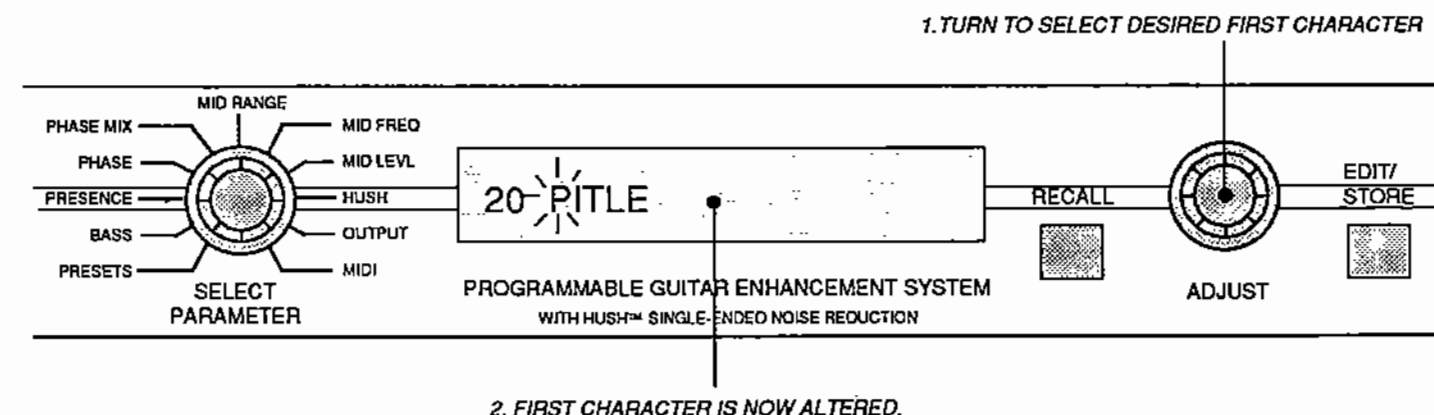
STEP 3: When the desired character is selected, press the EDIT/STORE button to store the character and start editing the next character. Each time the EDIT/STORE button is pressed, the following character will begin to flash. After each character is edited, the EDIT/STORE button must be pressed to store that character.

2. SECOND CHARACTER
NOW FLASHING.

1. PRESS TO STORE CHARACTER
AND MOVE TO NEXT CHARACTER.
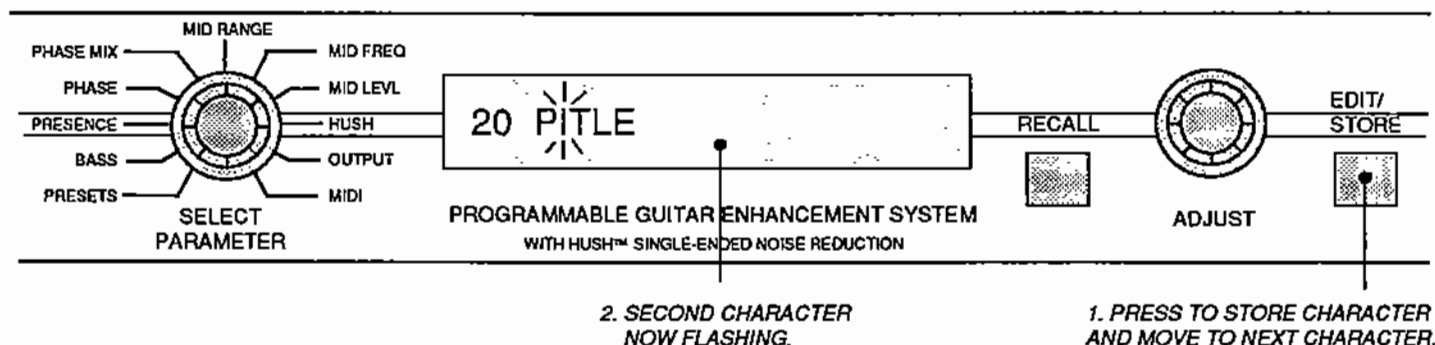
NOTE: To end title editing, press the RECALL button, or turn the SELECT PARAMETER control.

1. TURN TO EXIT TITLE
EDIT FUNCTION.
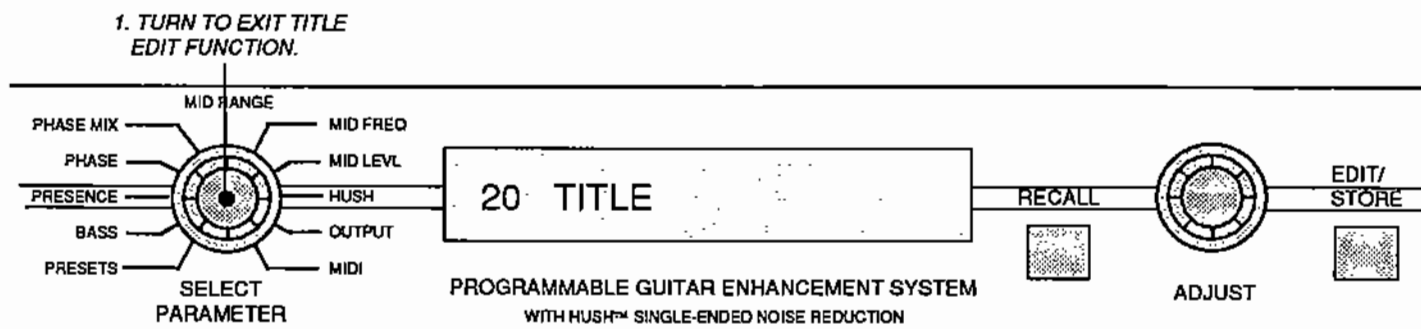
5. Setup and Designing Your Own Presets

For best results, the Pro Q™ should be placed immediately following your preamp in the signal chain (as shown in the diagram below).
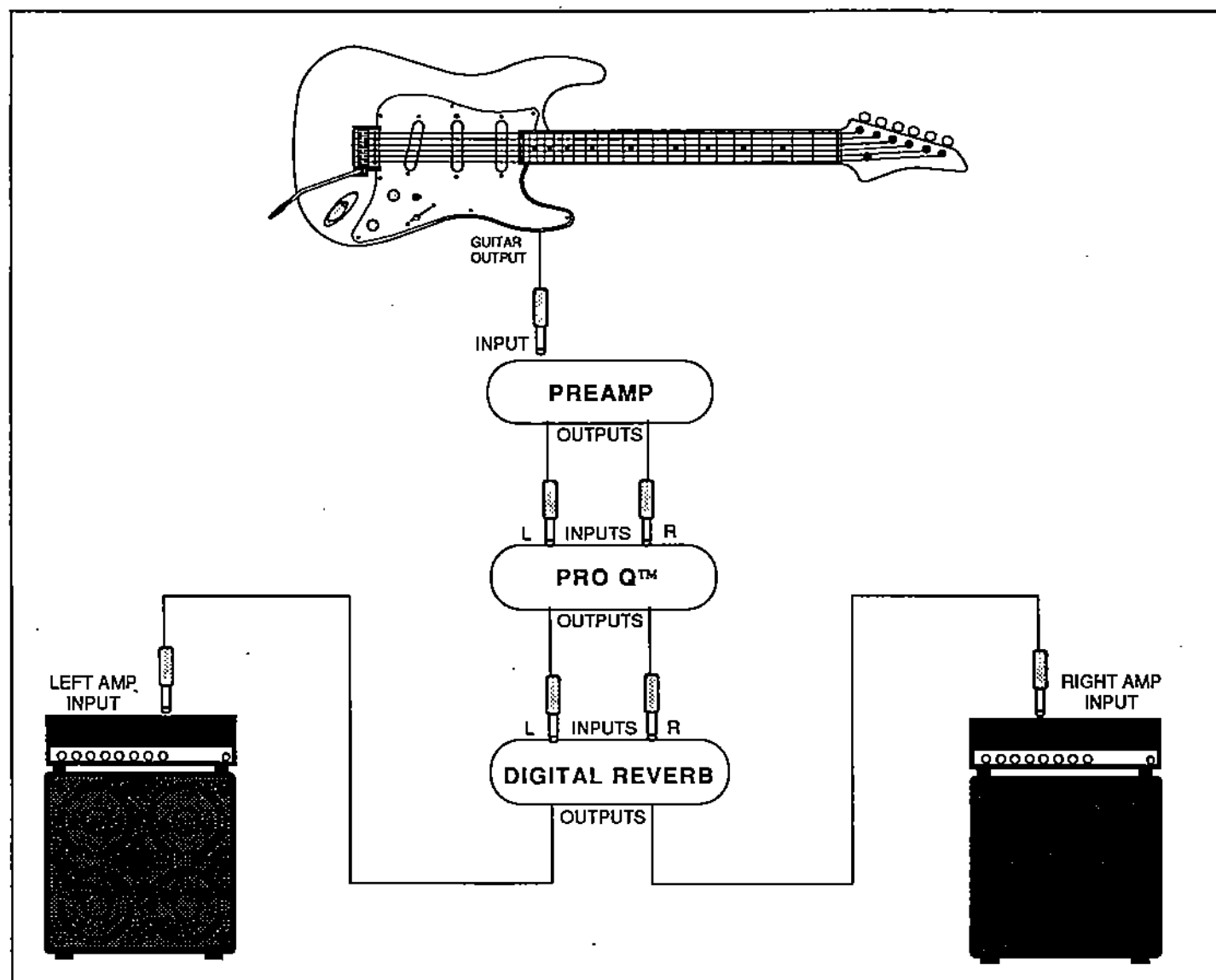
To get an idea of the different types of signal enhancement the Pro Q™ is capable of, scroll through the factory presets and see how each affect the sound of your preamp. These presets were programmed with various preamps (tube and solid state) and can be altered to meet the needs of virtually any situation. Some may be used to brighten up clean guitar sounds while others can be used to achieve "fatter" or more "crunchy" distorted sounds desirable to many hard rock style players.

It should also be noted that setting up the right channel parameters in such fashion that they achieve a different overall sound than those of the left channel will result in much wider stereo separation and give the effect of a bigger guitar sound.

BASS control:

The BASS control is capable of boosting the low freqencies (170Hz) up to 25dB, which is more than most preamps and EQs provide. If the BASS control on your preamp is centered at a different frequency than that of the Pro Q™, you may find that the BASS frequencies chosen for the Pro Q™ may suit some applications better than that of your preamp. To experiment, try setting the BASS control of your preamp flat (no cut or boost) while boosting the BASS control of the Pro Q™. Compare this sound to that of setting the BASS on the Pro Q™ flat while turning up the BASS on your preamp and see which better suits the application (possibly a combination of the two would be even more desirable).

PRESENCE control:

The PRESENCE control is capable of a high frequency (6.5KHz) boost of up to 25dB. This is also more than most preamps and EQs offer and more desirable results may be obtained by experimenting with this control and the presence (or treble) control of your preamp in the same manner as described in the above BASS control section.

PHASE and PHASE MIX controls:

The PHASE and PHASE MIX controls work in conjunction with one another. This section of the Pro Q™ incorporates the use of a phase-altered sidechain signal which is mixed (dependant upon the PHASE MIX control) with the original signal. Turning the PHASE control in either direction will change the frequency points at which additions and subtractions to the original signal will occur. This feature of the Pro Q allows for many diverse tone variations which would be impossible to replicate with only an EQ. This section also has a prominent effect on distorted guitar signals.

MID RANGE, MID FREQ and MID LEVEL controls:

These three controls work in conjunction to produce a sharp notch or boost in the mid band section in which the notch/boost has a very narrow Q (bandwidth) and can severely reduce an unwanted frequency (notch) or greatly emphasize a desired frequency (boost) at any point in the mid band from 80Hz to10KHz.

Frequency Notched Signal

LEVEL

+20dB

0dB

-20dB

20Hz   5KHz   10KHz   15KHz   20KHz

FREQUENCY

Frequency Boosted Signal

```
          +20dB
LEVEL      0dB
          -20dB
          20Hz      5KHz      10KHz     15KHz     20KHz
                        FREQUENCY
```
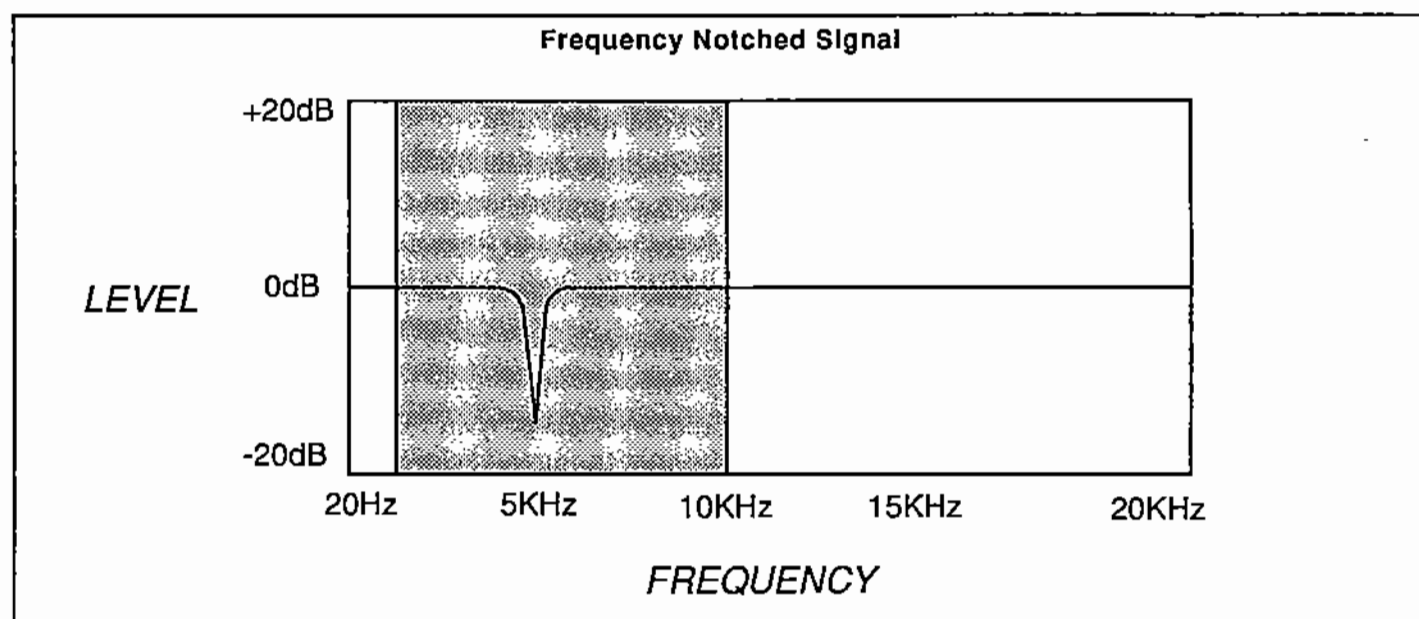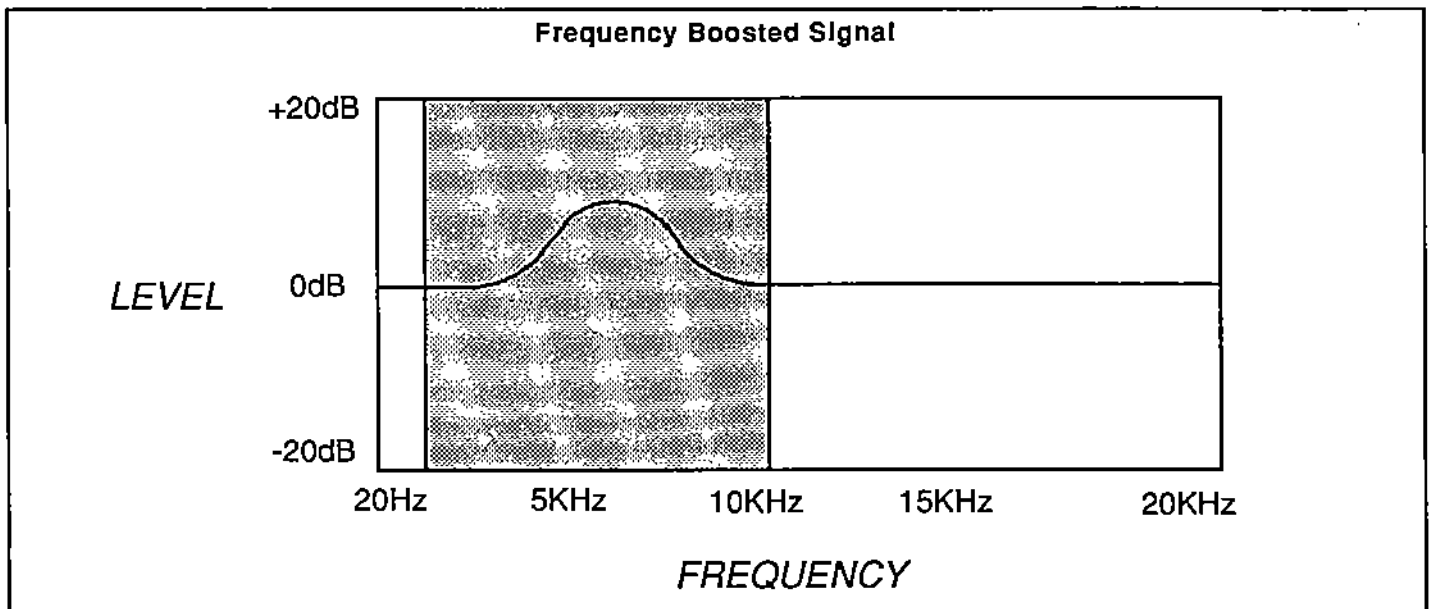
The MID RANGE control allows the user to select either the notch or boost function by turning the ADJUST control.

The MID FREQ control selects the frequency at which the signal is to be notched or boosted.

The MID LEVEL control selects the degree to which the selected frequency will be notched or boosted. It is capable of producing a notch of greater than 20dB or a boost of up to 12dB.

HUSH™ control:

The HUSH™ control sets the threshold level at which the HUSH™ circuit of the channel will begin to operate. It can be adjusted from -70dB up to 0dB. HUSH™ is Hush Systems' patented single - ended noise reduction system. This system is comprised of two parts: the expander and the dynamically controlled low - pass filter.

The expander operates like an electronic volume control. The design utilizes a voltage - controlled amplifier (VCA) circuit which can control the gain between the input and output from unity to 30, 40 or even 50 dB of gain reduction. When the input signal is above the user pre - set threshold point, the VCA circuit is at unity gain. This means that the amplitude of the output signal will be equal to that of the input signal. As the input signal amplitude drops below the user pre - set threshold point, downward expansion begins. At this point the expander operates like an electronic volume control and gradually begins to decrease the output signal level relative to the input signal level. For example, if the input signal were to drop below the threshold point by 10dB, the output would drop approximately 12dB. As the input signal drops further below the threshold point, downward expansion increases exponentially. For example, if the input signal dropped 20dB below the threshold point, the output level would drop by approximately 30dB. A drop in the input level by 30dB would cause the output level to drop by approximately 60dB (this would be 30dB of gain reduction). In the absence of any input signal, the expander will reduce the gain so that the noise floor becomes inaudible.

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TYPICAL EXPANSION RATIO
(with 0dB threshold)

INPUT LEVEL (In dB)		OUTPUT LEVEL (In dB)
0		0
-10		-10
-20		-20
-30		-30
-40		-40
-50		-50
-60		-60
-70		-70
-80		-80
-90		-90
-100		-100

As the signal level decreases at the input of the HUSH...

...the output signal level will decrease exponentially.
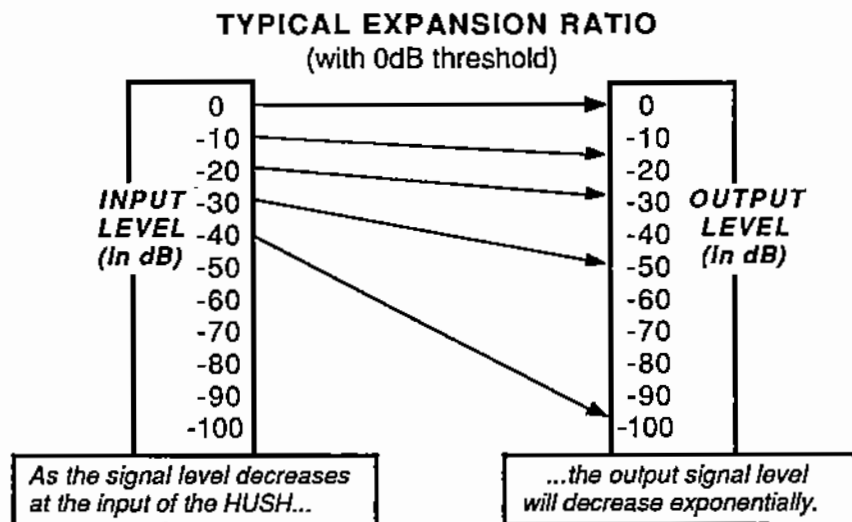
The dynamically - controlled low - pass filter operates as follows. In the absence of any audio signal, the dynamic filter will close down to the factory preset cut - off point of 800Hz. This means that the filter is only allowing frequencies of 800Hz and below to pass through. If an input signal had a bandwidth from 20Hz to 1KHz, the filter would open far enough to pass up to the 1KHz frequency and it's harmonics, while reducing any noise present from approximately 2KHz to 20KHz. If a broad band signal, with frequency components up to 20KHz appears at the input, the dynamic filter would open to it's full extreme allowing the bandwidth to open all the way to 40KHz. In simple terms, what this means is that if a signal is present at the input which is primarily bass components, the dynamic filter will reduce any mid or high band noise. However, if the input signal has high frequency components present, the dynamic filter will open to it's full extreme to pass the signal and eliminate the possibility of a loss of high - end frequency response.
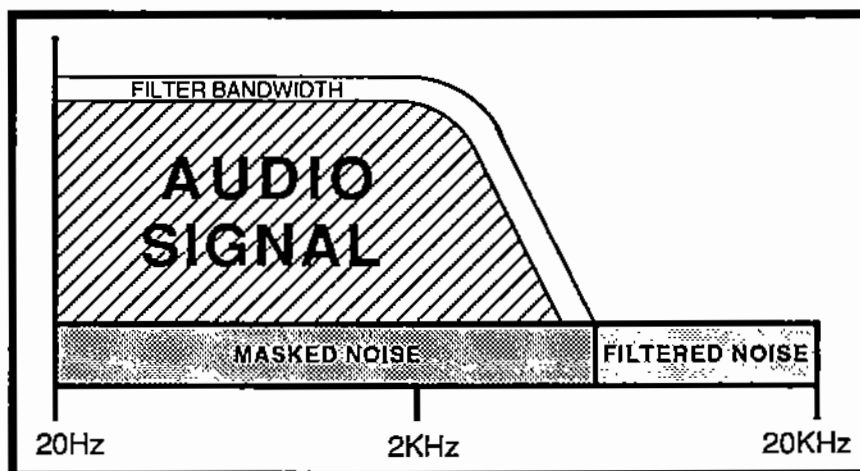
These two processes of downward expansion and dynamic filtering work in unision to produce the highly proficient HUSH™ noise reduction system.

NOTE: All HUSH™ parameters stored in the factory presets are set to their minimum setting (-70) and will not remove noise generated by your preamp until they are reset to the proper threshold setting by you.
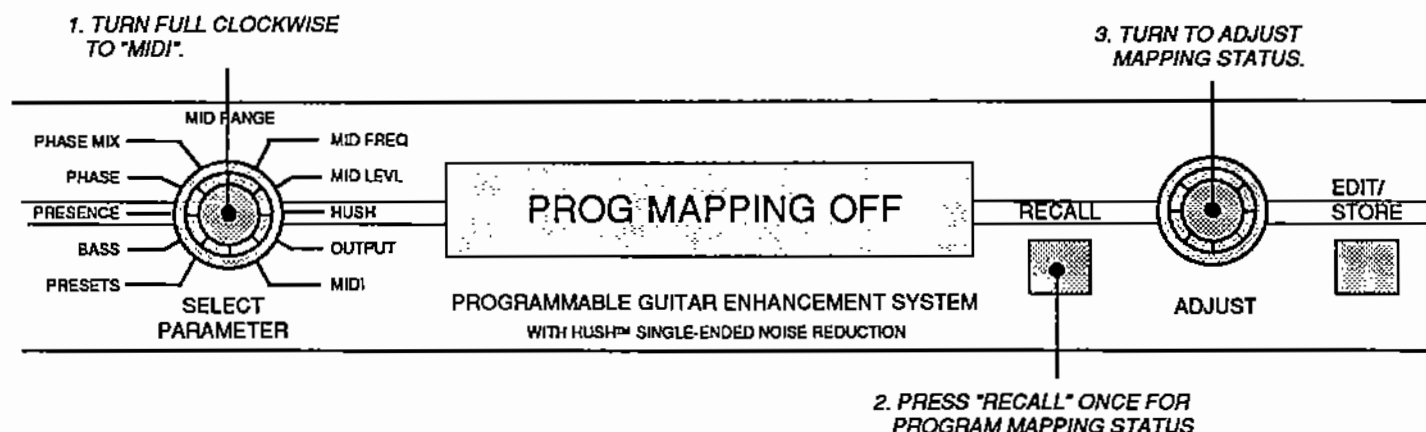
6. MIDI OPERATION

A. Recalling MIDI Options

The most clockwise position of the SELECT PARAMETER control is MIDI. The MIDI options available are as follows: mapping status, program mapping, controller mapping and MIDI channel. These options may be stepped through by pressing the RECALL button repeatedly. At each option the status can be viewed. By turning the SELECT PARAMETER control counter clockwise while in any mode but the program mapping or controller mapping modes, you will exit the MIDI options.

B. Mapping Status

Mapping status turns the program mapping ON or OFF. When the program mapping is OFF and a MIDI program change is initiated, the preset number recalled is the program number sent via MIDI. When the program mapping is ON and a MIDI program change is initiated, the program number sent via MIDI is mapped to a preset number and that preset is recalled by the Pro Q™. The program mapping status may be changed by turning the ADJUST control and pressing the EDIT/STORE button. The changed status will remain in effect until it is changed again, even if the unit is powered down.

1. TURN FULL CLOCKWISE TO "MIDI".

3. TURN TO ADJUST MAPPING STATUS.

PROG MAPPING OFF

PROGRAMMABLE GUITAR ENHANCEMENT SYSTEM
WITH HUSH™ SINGLE-ENDED NOISE REDUCTION

2. PRESS "RECALL" ONCE FOR PROGRAM MAPPING STATUS

C. Program Mapping

The program mapping is initially programmed for a one to one correspondence (that is, program number nine is mapped to preset nine, ten to ten, etc.). The program mapping may be changed by selecting the MIDI program number via the SELECT PARAMETER control, then by selecting the preset number to map to via the ADJUST control. The preset number may also be turned to the OFF position, thereby not responding to the corresponding MIDI program change. Once the desired preset number is selected, press the EDIT/STORE button to save the change for each altered mapping. The mapping change MUST be stored for the Pro Q™ to respond to it.

2. TURN TO SELECT MIDI PROGRAM NUMBER.

3. TURN TO SELECT PRESET NUMBER TO MAP TO.

MAP 1 TO 1

PROGRAMMABLE GUITAR ENHANCEMENT SYSTEM
WITH HUSH™ SINGLE-ENDED NOISE REDUCTION

1. PRESS A SECOND TIME FOR PROGRAM MAPPING.
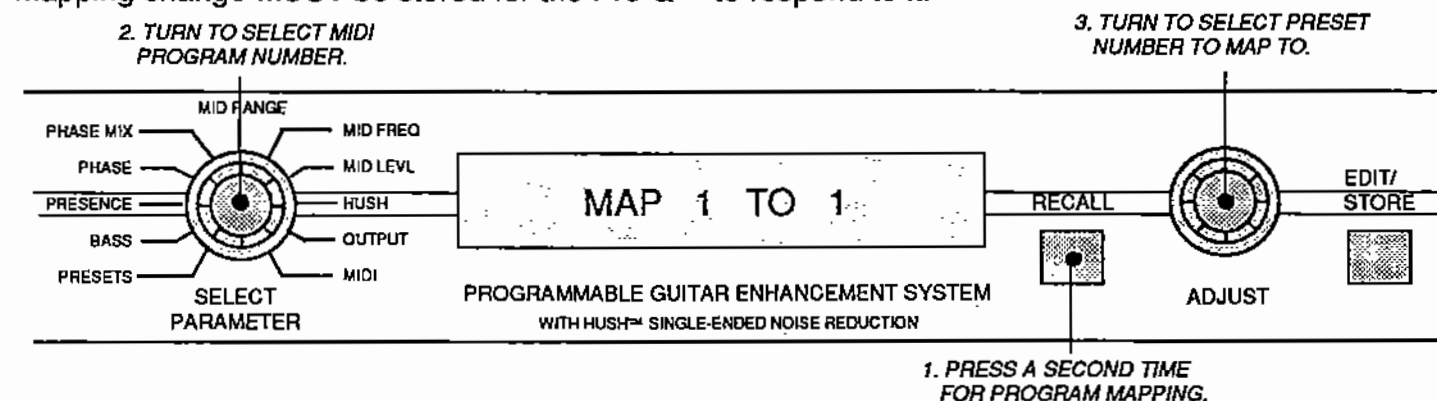
D. Controller Mapping

The controller mapping will map a Pro Q™ adjustable parameter to a MIDI controller number, starting at controller zero through controller 120 (or OFF). The controller mapping may be changed by selecting the parameter via the SELECT PARAMETER control, then by selecting the control number via the ADJUST control. The control number may also be turned to the OFF position, thereby not letting that parameter respond to any MIDI controll change. Once the desired control number is selected, press the EDIT/STORE button to save the change for each altered mapping. The mapping change must be stored before the Pro Q™ will respond to it.

2. TURN TO SELECT PARAMETER TO BE CHANGED.

3. TURN TO SELECT CONTROL NUMBER.

L BASS TO 0

PROGRAMMABLE GUITAR ENHANCEMENT SYSTEM
WITH HUSH™ SINGLE-ENDED NOISE REDUCTION

1. PRESS A THIRD TIME FOR CONTROLLER MAPPING.
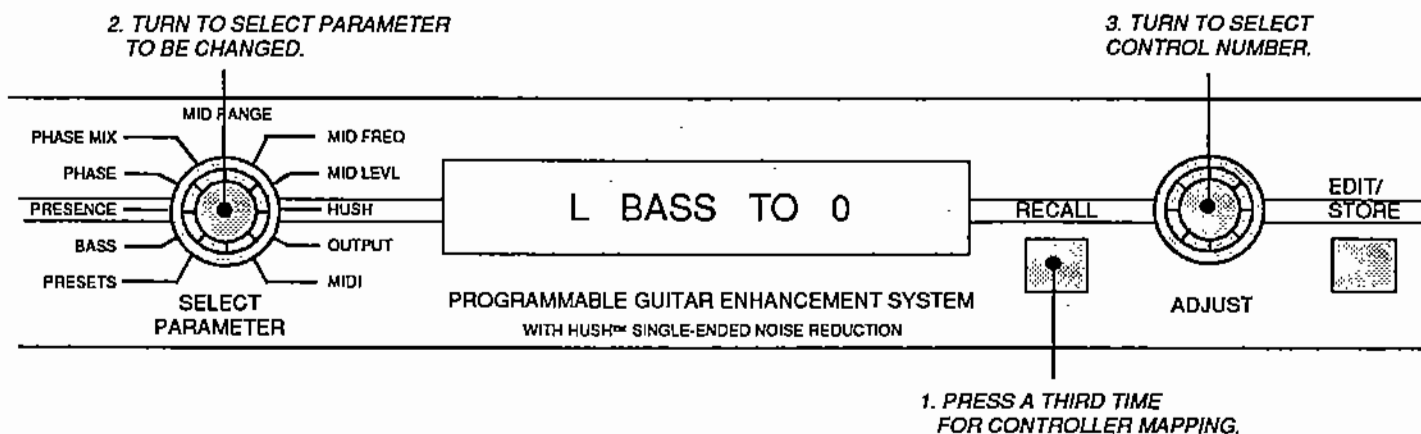
E. MIDI Channel Number

The MIDI channel is the channel that the Pro Q™ will receive MIDI commands on. To immediately change the channel, turn the ADJUST control to the desired channel. The channel may be set to number 1-16, OMNI (receives on all channels) or to the OFF position (not allowing the Pro Q™ to receive any MIDI commands). The changed channel need not be stored before the Pro Q™ will respond to it. The change will remain in effect until it is changed again, or until the unit is turned off. Press the EDIT/STORE button to save the change for the next time the unit is turned on, (if desired). Be sure that the MIDI channel of the Pro Q™ matches the MIDI channel of the transmitting device you wish to receive MIDI information from.

2. TURN TO SELECT MIDI CHANNEL.

MIDI CHANNL OMNI

PROGRAMMABLE GUITAR ENHANCEMENT SYSTEM
WITH HUSH™ SINGLE-ENDED NOISE REDUCTION

1. PRESS A FOURTH TIME FOR MIDI CHANNEL.

17
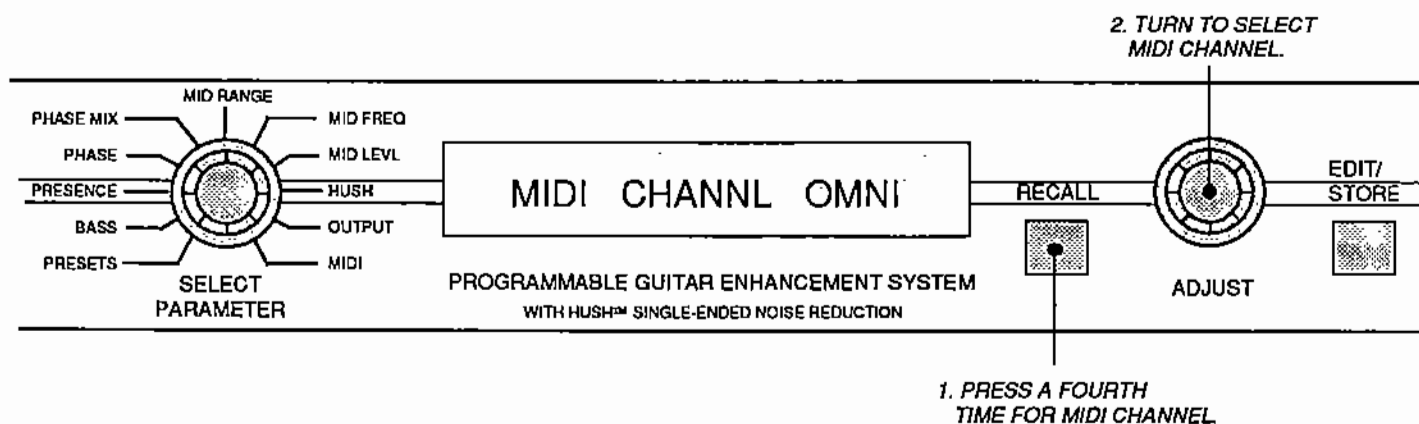
F. MIDI IMPLEMENTATION CHART

DATE: MAY 3, 1991   MODEL: Pro Q™   VERSION: 1.2

	FUNCTION	RECOGNIZED	REMARKS
BASIC	DEFAULT	1-16	MAY BE SAVED IN
CHANNEL	CHANGED	1-16	NONVOLATILE MEMORY
MODE	DEFAULT	X	
	MESSAGES	X	
	ALTERED	X	
NOTE	TRUE VOICE	X	
NUMBER			
VELOCITY	NOTE ON	X	
	NOTE OFF	X	
AFTER	KEY'S	X	
TOUCH	CHANNEL	X	
PITCH BEND		X	
CONTROL		O	0 = (L) & (R) Bass
CHANGE		O	1 = (L) & (R) Presence
		O	2 = (L) & (R) Phase
		O	3 = (L) & (R) Phase Mix
		O	4 = (L) & (R) Mid Range
		O	5 = (L) & (R) Mid Freq
		O	6 = (L) & (R) Mid Level
		O	7 = (L) & (R) HUSH™
		O	8 = (L) & (R) Output Level
		O	9 = Stereo Master
		O	10 = Bypass
PROGRAM	TRUE NUMBER	O	
CHANGE			
SYSTEM		X	
EXCLUSIVE			
SYSTEM	SONG POSITION	X	
COMMON	SONG SELECT	X	
	TUNE REQUEST	X	
SYSTEM	CLOCK	X	
REAL TIME	COMMANDS	X	
AUXILARY	LOCAL ON/OFF	X	
MESSAGES	ALL NOTES OFF	X	
	ACTIVE SENSING	X	
	SYSTEM RESET	X	

*THE PARAMETERS MAY BE ASSIGNED TO ANY CONTROL NUMBER FROM 0 - 120, OR THEY MAY BE ASSIGNED TO BE "OFF".

O : YES

X : NO

G. Factory Restore Procedure

Your Pro Q Version 1.2 software includes a reinitialization feature which allows for all the presets to be restored to their original condition. This procedure allows you to to restore the Pro Q memory as it was shipped from Rocktron.

!! CAUTION !!
This procedure will permanently erase all user presets (1 - 108) and replace them with the factory presets found in presets (109 - 128). If you have written and stored presets in user presets 1 - 108 which you do not want to lose, make a record of all parameter values before perfoming the Factory Restore procedure.

Step 1: To perform Factory Restore, first recall preset #121 (preset #121 is the only preset where this function can be found).

RECALL

DISPLAY SHOWS:

BYPASS	121

Step 2: Turn the SELECT PARAMETER control one step past "MIDI". In preset #121 this is Factory Restore. The display will show "REINITIALIZE 0".

DISPLAY SHOWS:

REINITIALIZE	0

MID RANGE
PHASE MIX — — MID FREQ
PHASE — — MID LEVL
PRESENCE — — HUSH
BASS — — OUTPUT
PRESETS — — MIDI
— FACTORY RESTORE

SELECT
PARAMETER
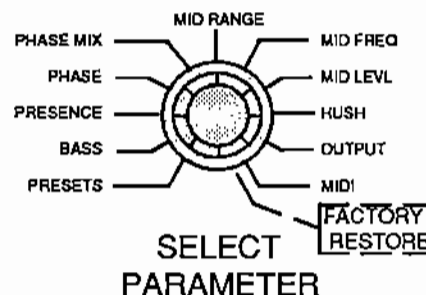
Step 3: Turn the ADJUST control until the code number 246 is reached.

DISPLAY SHOWS:

REINITIALIZE	246

ADJUST

Step 4: Pressing the EDIT/STORE button at this time *will erase all user presets and replace them with the factory presets!* Press the EDIT/STORE button to initiate the Factory Restore procedure. The display will show "INITIALIZING`" while it is reinitializing.

EDIT/
STORE

DISPLAY SHOWS:

INITIALIZING

Step 5: After the reinitialization is complete, the display should read "ERRORS 0 " meaning "zero errors". Turn the SELECT PARAMETER control to exit the function. Preset #121 will be the current preset.

DISPLAY SHOWS:

REINITIALIZE   246

PHASE MIX
PHASE
PRESENCE
BASS
PRESETS

MID RANGE

MID FREQ
MID LEVL
HUSH
OUTPUT
MIDI

SELECT
PARAMETER
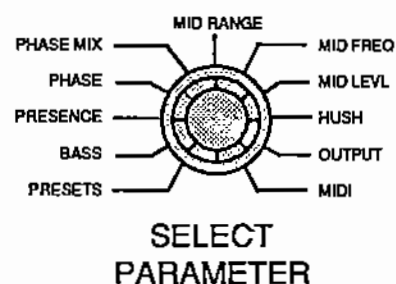
Note: If the reinitialization process is completed and any number other than "0" is displayed, the Pro Q did not reinitialize properly and the original Pro Q memory has not been fully restored.

Should this condition occur, power the unit down for 10 minutes before attempting to restore again (repeat the process). If restoration is still not completed properly, send the unit back to Rocktron or an authorized Rocktron service center.

7. SPECIFICATIONS

INPUT

Maximum Input Level	+20dBu
Impedance	470K Ohms
Jacks	1/4" Mono

OUTPUT

Maximum Output Level	+20dBu
Impedance	less than 100 ohms
Jacks	1/4" Mono

NOISE FLOOR	95dBu A-weighted
DYNAMIC RANGE	115dBu A-weighted
THD + NOISE	.027% @ 0dBu 1KHz .019% @ +4dBu 1KHz
FREQUENCY RESPONSE	+0, -1.5dBu 20Hz - 20KHz
POWER REQUIREMENTS	9VAC/800mA
DIMENSIONS	19" x 7" x 1 3/4"

NOTE: 0dBu = 0.775V RMS

4/1/92 cmc

NEW FACTORY PRO Q SETTINGS

VERSION 1.3

8. FACTORY PRESETS CHART

Preset#	Name	(L) Bass	(L) Presence	(L) Phase	(L) Phase Mix	(L) Mid Range	(L) Mid Freq	(L) Mid Level	(L) Hush	(L) Output	(R) Bass	(R) Presence	(R) Phase	(R) Phase Mix	(R) Mid Range	(R) Mid Freq	(R) Mid Level	(R) Hush	(R) Output	Stereo Master
128	DREADNAUGHT	12	0	100	68	Boost	.10K	75→50	-70	98→100	55	80	88	100	Notch	1.2K	100	-70	83	ON
127	BOARDERLAND	43→69	19	80	75	Boost	10K	100→72	-70	85	15	10	30	65	Boost	.50K	100	-70	86→85	ON
126	HOLOGRAPH	25→20	34→75	81→100	85→60	Notch	12K→8.2K	95→41	-70	100	16	71	88	85	Boost	10K	93	-70	85→88	ON
125	CLOUDBURST	15	10	30	65	Boost	.50K	100	-70	74→85	69	19	80	75	Boost	10K	100	-70	75→85	ON
124	PRIMA DONNA	16	19→74	88	85	Boost Notch	10K	93→69	-70	98→97	25	75→23	31	85	Notch	1.2K	93	-70	100→90	ON
123	POINT BLANK	68→16	80→26	87→100	78→50	Notch	12K→10K	61→67	-70	98→100	40	76	48	44	Boost	.15K	37	-70	91→80	ON
122	TURBULENCE	40	76	48	44	Boost	.15K	37	-70	91→81	63	80	87	78	Notch	1.2K	51	-70	98→80	ON
121	BYPASS	0	0	0	0	Notch	80Hz	0	-70	100	0	0	0	0	Notch	80Hz	0	-70	100	OFF
120	EVIL GENIUS	75	44	84	70	Boost	10K	100	-70	79	56	0	30	51	Notch	80Hz	85	-70	100→90	OFF
119	TO THE BONE	63	0	87	100	Boost	80Hz	37	-70	100→80	0	22	29	95	Boost	10K	84	-70	77	OFF
118	PLUTONIUM	10	10	10	10	Boost Notch	10K	91→102	-70	88→84	45	88→50	99	100	Boost	.20K	50	-70	88→81	OFF
117	HANKY-PANKY	26	20	20	81	Notch	1.1K	68	-70	97→93	61	20	20	33	Boost	6.4K	20	-70	97→90	OFF→ON
116	POLTERGEIST	60	40	30	70	Boost	5.1K	48	-70	100→90	30	99→15	30	30	Boost	.50K	30	-70	82→90	OFF
115	FATAL NAPE	68	40	66	100	Boost	8.6K	40	-70	87→78	16	0	100	100	Boost	10K	94	-70	91→80	OFF
114	SHELL SHOCK	55	80→69	88	100	Notch	1.2K	100	-70	88→85	12	0	100	68	Boost	.10K	75	-70	98→85	ON→OFF
113	VIVID DREAMS	73	19	93	100	Boost	10K	100	-70	82	56	60	80	37	Boost	.20K	39	-70	82→88	OFF
112	THUNDER CLAD	46→69	19	80	0	Boost	10K	0	-70	85→95	0	0	68	90	Notch	1.1K	68	-70	100→95	ON
111	THIRD AXIOM	0	0	68	90	Notch	1.1K	68	-70	100→95	69	0	80	0	Boost	10K	0	-70	91→90	ON
110	ASSASSIN	20	19	80	0	Boost	10K	82	-70	94	44	19	53	54	Boost	4.6K	100	-70	83	ON
109	DELIRIOUS	25→75	2	100	0	Boost	.65K	100	-70	73	0	61	51	88	Boost	10K	0	-70	73→94	OFF

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PART # 098-0084B