



***USER MANUAL***

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### From Jim Marshall

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### From Jim Marshall

I would like to thank you personally for selecting the JFX-1 Digital Signal Processor.

As a result of the success of the internationally acclaimed JMP-1 stereo valve MIDI pre-amp our first digital product, my design team's next step was to create a Digital Signal Processor in the same style to expand the guitarist's range of usable sounds even further.

The same team who designed the JMP-1 devoted many hours of research and development to the creation of the JFX-1, the first Marshall Digital Signal Processor.

As with all products that bear the Marshall logo, no matter how technically advanced, you can be sure that the utmost care and highest possible standards of quality control have been employed in the manufacture of your JFX-1.

Though designed to be totally user friendly and extremely intuitive to operate, I strongly suggest that you read this manual carefully to fully understand and make the most of the JFX-1's many features.

I wish you many happy hours exploring the vast range of sonic possibilities opened up by the processing power of your new JFX-1.

Yours Sincerely,

# WARNING!

## PLEASE READ THE FOLLOWING LIST CAREFULLY

- A. DO NOT attempt to remove the JFX-1's lid, There are no user serviceable parts inside.
- B. ALWAYS have this equipment serviced or repaired by competent, qualified personnel.
- C. NEVER use the JFX-1 in damp or wet conditions.
- D. ALWAYS use only the Marshall power supply that is provided with the JFX-1.
- E. PLEASE READ this instruction manual carefully before switching on.

## Introduction

The Marshall JFX-1 is a totally programmable 24 bit digital effects processor which features the highest quality effects algorithms and also allows complete control via MIDI.

By utilising a 64x over-sampling 16 bit Sigma/Delta Analogue to Digital converter in conjunction with 16 bit linear dual Digital to Analogue conversion, the JFX-1 produces effects that have superb resolution and depth, with an absolute minimum of distortion and maximum dynamic range.

Also by incorporating a high quality Voltage Control Amplifier the all important dry signal is kept free from degradation - essential for maintaining the integrity of your direct sound.

Although suitable for all processing applications the JFX-1 has been designed primarily as a guitar rack effects processor. The first 50 programs have been pre-set at the Marshall factory but may be edited in full. They can also be restored without loss of data custom programmed into memories 50 to 127. The individual algorithms for Chorus/Flange, Multi-Tap Delay, Delay, Reverb and Multi-Effect, give you the ability to edit and store a superb library of effects, with no unnecessary or redundant features to confuse the issue.

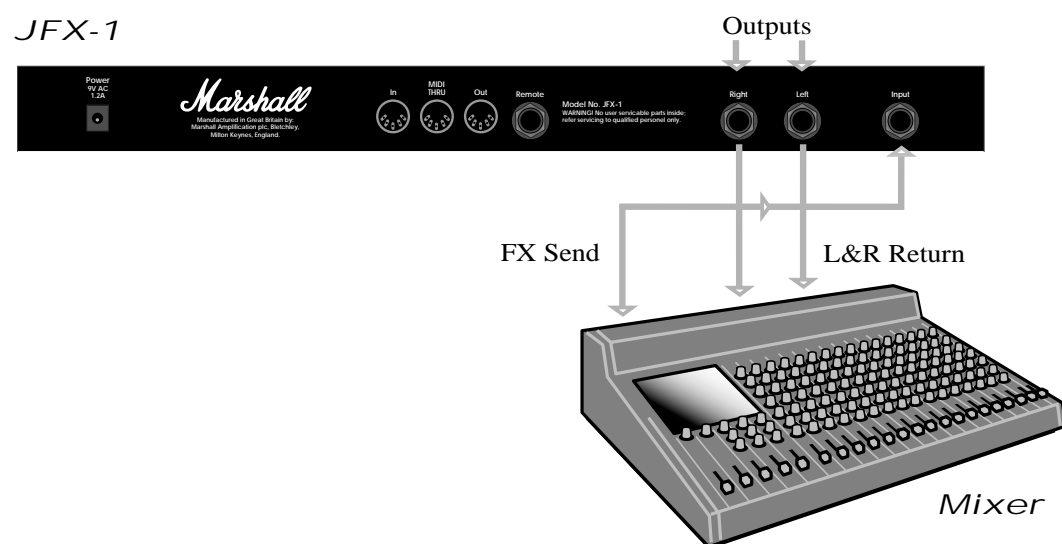
If you want to use the JFX-1 with an amp head or combo which has channel switching facilities the special Remote Jack can be programmed to activate the Channel switch as part of the selected program.

Whether you are recording in a professional or home studio or playing live through a combo or full stereo rack system, the JFX-1 puts a vast range of creative possibilities instantly at your fingertips.

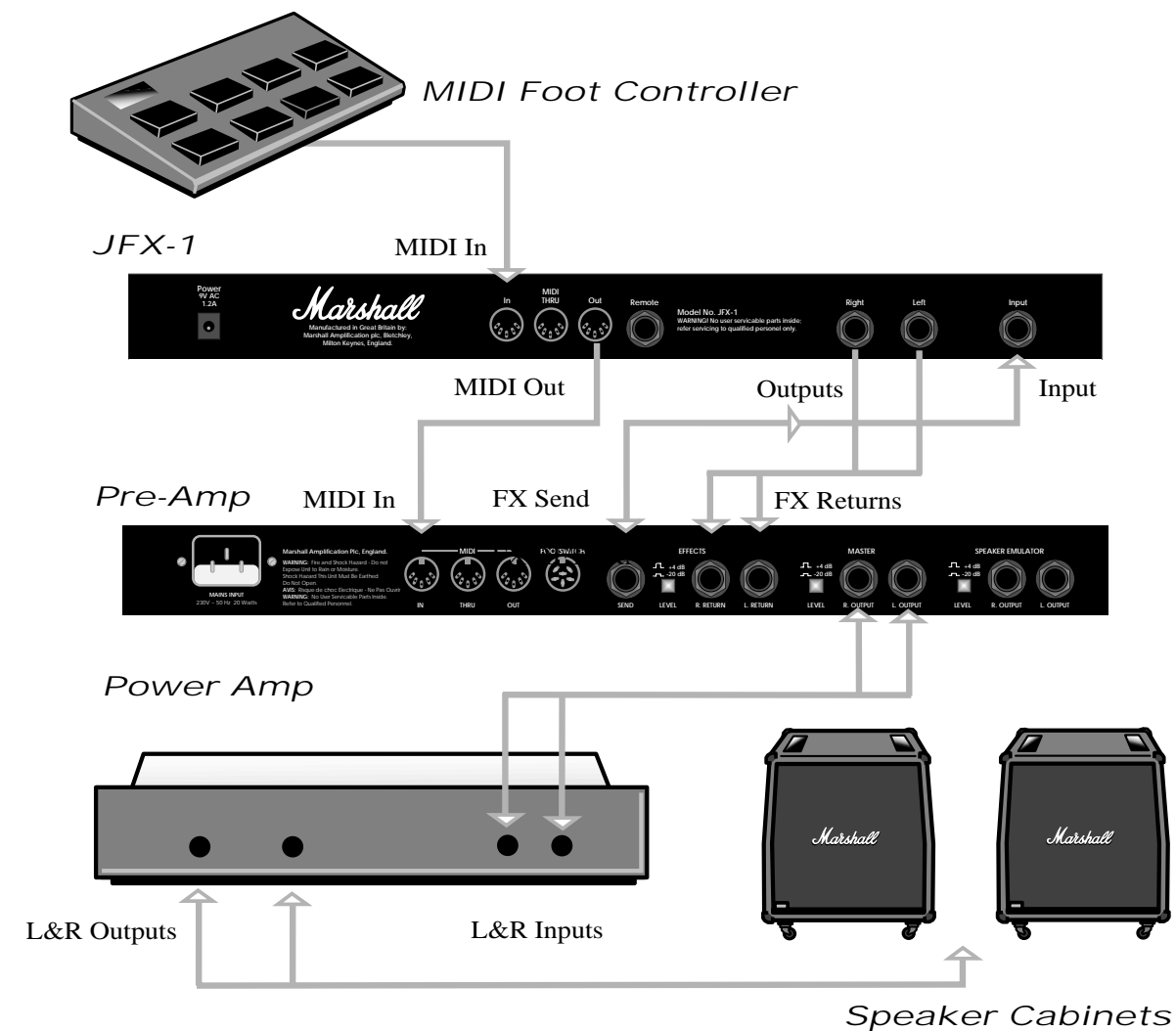
It is advisable to keep this manual in a safe place for future reference after studying it carefully, as gaining a full understanding of how the JFX-1 operates will ensure that you are getting the most from it's processing power- especially when designing your own personal sounds.

## Section 1 - Connection Diagrams

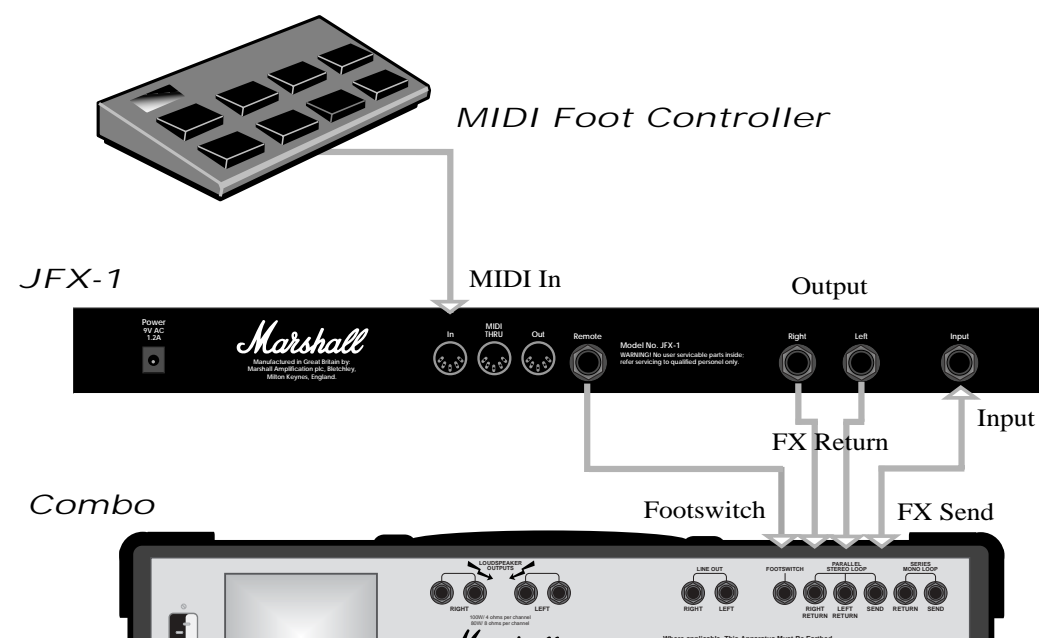
### Set-up A: With a Home / Recording Mixer.



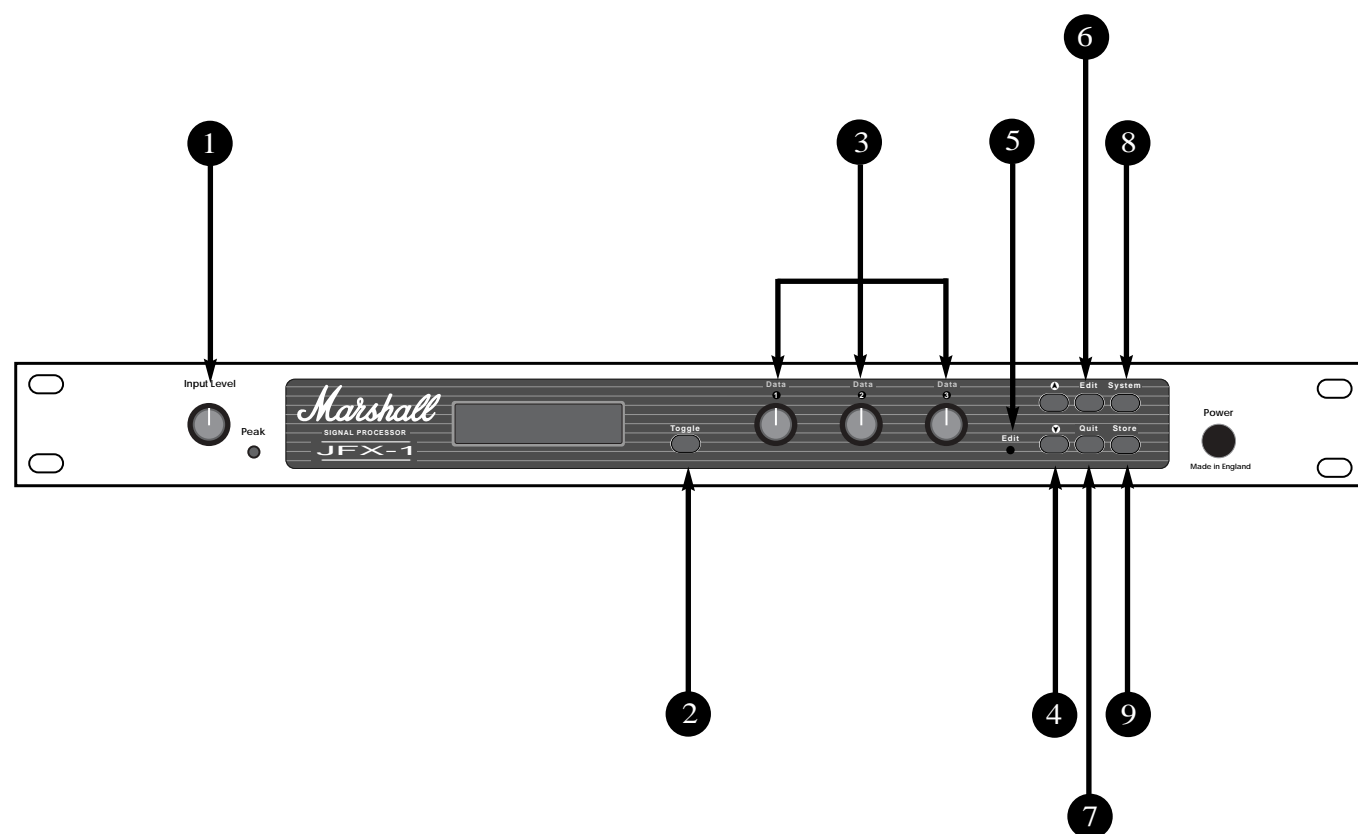
### Set-up B: Stereo Rack System.



### Set-up C: With a Stereo or Mono combo or amp.



Please Note: The JFX-1 will also work with amps / combos operating in Mono. In this instance follow the directions as above and link from either the Left or Right output to the Effects Return.



## Section 2 - Quick Reference Guide

### 1. Input Level Control

Selects the input level. The peak LED should light occasionally at optimum level.

### 2. Toggle Switch

Press to display output levels of direct and effects signal. Press again to return the display to the point from where you last selected the 'Toggle' function.

### 3. Data Controls

Use the rotary controls to adjust parameters displayed by the LCD window.

### 4. Up & Down Keys

Use these to scroll through and select programs when in Normal mode. When in Edit mode use to select the parameters to be edited.

### 5. Edit LED

Indicates when a selected program has been edited but not stored.

### 6. Edit Key

Press once to enter the program menu. Press again to display parameter to be edited.

### 7. Quit Key

Takes you back to the original program number and title.

### 8. System Key

Gives access to the MIDI functions and remote jack.

### 9. Store Key

Press once to show the program location to which the altered parameters will be stored. Press again to complete the store.

## 2.1 - Selecting a Stored Pre-Set

When you first switch on the JFX-1 it will automatically select program : 000. Thereafter it will go to the program location last selected before switching off.

To recall a stored program in the JFX-1, press the UP or DOWN keys until you reach the desired program location.

The Display Shows:



The program is automatically selected once you stop scrolling through.

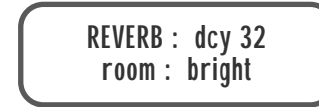
## 2.2 - Editing Pre-Set Programs

To alter the parameters of a stored JFX-1 program you must first press EDIT.

The Display shows:



Then press EDIT a second time.



Now use the rotary data controls to adjust the parameter values.

DATA control 1 adjusts the first parameter (in this example 'dcy').



DATA control 2 adjusts the second parameter (in this example 'room').



DATA control 3 adjusts the third parameter (in this example 'bright').



As soon as any parameter is adjusted the 'EDIT' light will show.



Let us assume that you have altered the decay to value '50', the type of reverb to 'hall' and left the character of the reverb on 'bright'.

The Display shows:



## 2.3 - Storing Altered Parameter Values

To store altered parameter values, press the 'STORE' key.



The Display shows:



If you wish to store the altered parameters to the same location, press 'STORE' a second time.



The Display shows:



If you wish to store the altered parameters to a different location, before pressing the 'STORE' key for the second time, use the 'UP' and 'DOWN' keys to select the new program location. E.G. from program 4 to program 54.



The Display shows:



Pressing 'STORE' again completes the store function.



## 2.4 - Naming a Program

To change the name of an existing or new program, press the 'EDIT' key.



The Display shows:



Press the 'UP' key to move the cursor along.



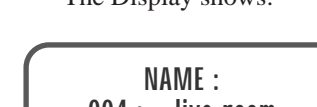
The Display shows:



Press the 'EDIT' key.



The Display shows:



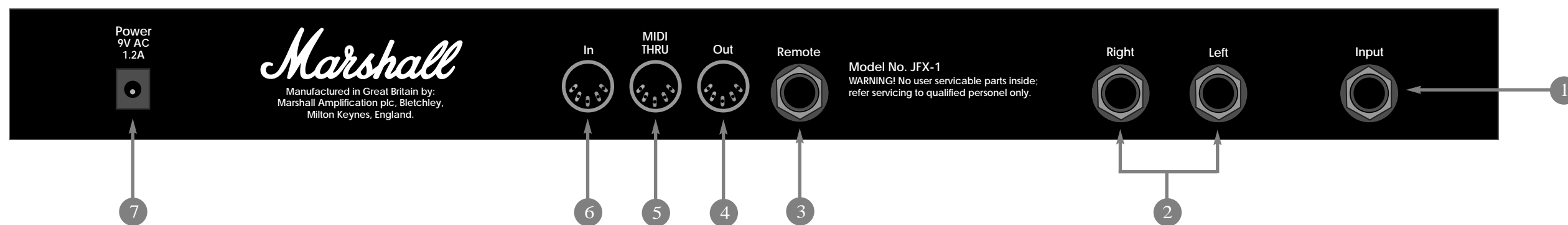
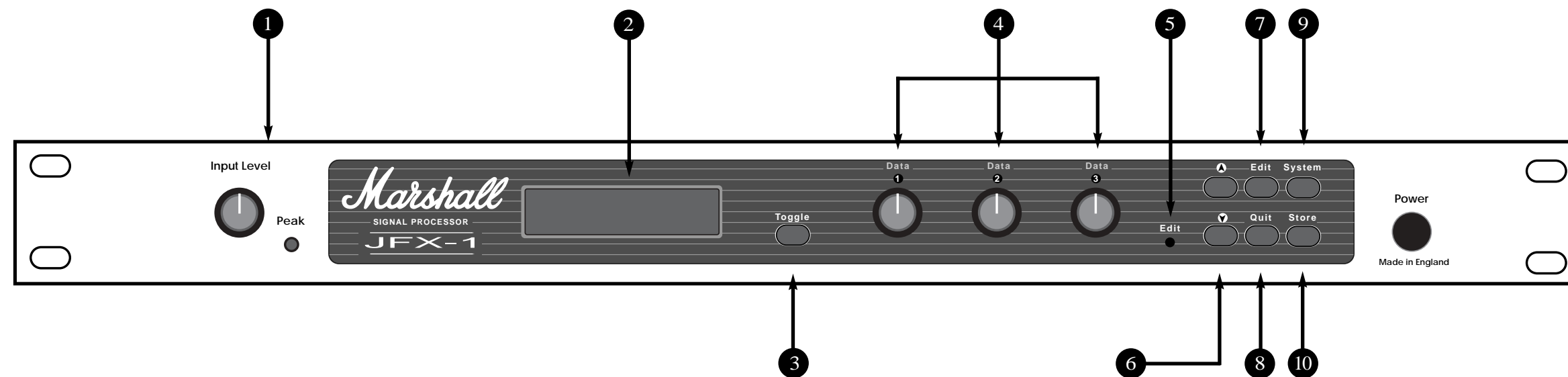
Move the cursor along using the 'UP' and 'DOWN' keys and as it rests under each letter, that character can then be altered using the Data control 3.



Follow the Store procedure for storing altered parameters by pressing the 'STORE' key once to show the desired program to which the name should be assigned and then a second time to complete the store.

Once the store function has been completed the 'EDIT' LED will go out.





### Section 3 - Front Panel

#### 1. Input Level & Peak LED :

Controls the level of the signal coming into the JFX-1. The optimum signal level is reached when the peak LED lights occasionally.

#### 2. Display Window :

This LCD display provides the interface between you and the JFX-1 by displaying the current status of all operating and programming functions in 2 lines of 16 characters each.

#### 3. Toggle Switch :

Pressing the Toggle Switch at any time displays the output levels of the Direct and Effects signal. The Direct level is adjusted using DATA Control ① and the Effects level using DATA Control ②. Both range from 00-99. Pressing 'Toggle' a second time returns you to the point in the program from where the initial toggle selection was made.

#### 4. DATA Controls :

Only operational when the JFX-1 is in Edit mode. DATA Control ① - Adjusts the first parameter to be edited. DATA Control ② - Adjusts the second parameter to be edited. DATA Control ③ - Adjusts the third parameter to be edited.

#### 5. Edit LED :

The LED indicates red only after any program parameter has been adjusted, but the program hasn't been stored.

#### 6. Up & Down keys :

Multi function keys which scroll through the stored programs in normal mode. When in Edit mode they move the cursor backward and forward for selections from the main menu. They also affect certain sub-menus such as MODE -where they scroll through the master modes available. NAME -where they move the cursor to the desired letter location.

In MULTI-TAP MODE they select the individual voices 1-6 and relative delay times for each voice. In REVERB mode they provide the selection of an alternative decay character. In the SYSTEM menu they switch the Remote Jack on/off plus select the MIDI Channel on which the JFX-1 receives MIDI data. They also provide the master location selections for the Input and Output mapping and MIDI controllers.

#### 7. Edit Key :

Puts the JFX-1 into Edit mode. Pressing once displays the main menu-pressing again displays the parameters which may be edited. Each subsequent press displays any further parameters available for editing until the display returns to the main menu.

#### 8. Quit Key :

Takes you back to the original program number and name from any point in the programming chain.

#### 9. System Key :

Takes you into the SYSTEM menu. Using the Up & Down keys to indicate the sub-menu required, the System key will take you to the REMOTE JACK on/off selection. MIDI section where each press of the key will show the next MIDI function to be programmed until you return to the initial system menu; and the BATTERY LEVEL indicator.

#### 10. Store Key :

Stores all edited parameters to the selected program location. Press once to display the program location number-press again to complete the store.

#### \* Note :

The JFX-1 features touch sensitive push keys. A single press will provide a single step increment, maintained pressure will provide a fast scroll through.

### 3.1 - Rear Panel

#### 1. Input Jack :

Input to accept the signal sent from your amplifier, pre-amp or mixing desk.

#### 2. Output Jacks ( Left & Right ) :

Stereo output from the JFX-1 to connect to the return inputs of your amplifier, pre-amp or mixing desk.

#### 3. Remote Jack :

When using an amp or combo with Channel switching facilities, connecting a lead from this output to the footswitch input of the amplifier, allows you to switch channels as you switch programs on the JFX-1.

#### 4. MIDI OUT :

Sends out-going MIDI messages from the JFX-1.

#### 5. MIDI THRU :

Sends out MIDI messages identical to those coming in through the MIDI IN terminal.

#### 6. MIDI IN :

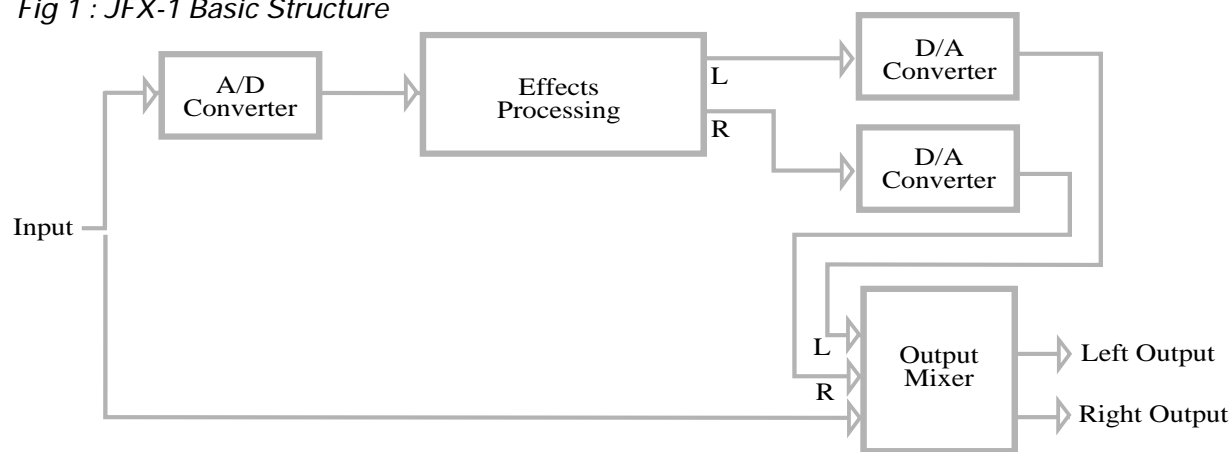
Terminal to receive incoming MIDI messages from any external MIDI device.

#### 7. Power Supply Input :

Accepts the input from the remote power supply provided with the JFX-1. Always ensure that only this power supply is utilised.

## Section 4 - The Mixer Section

Fig 1 : JFX-1 Basic Structure



From the input of the JFX-1 the signal is split along direct and effected signal paths.

The direct signal remains completely free of effects and by passing through a high quality Voltage Control Amplifier arrives at the final mix stage un-degraded.

The effects signal is converted from Analogue to Digital information, is processed, then split into left and right signals.

It is then converted back from Digital to Analogue information using converters of the highest possible quality, before arriving at the output mixing stage. Here the Direct and Effects signals are summed together to give a blend of exquisite quality and resolution.

When creating your own programs it is essential to first toggle to the Master Output Levels in order to pass some direct and effects signals through the outputs.

The optimum levels for each are set at around 80 - but can be adjusted to taste from 00 - 99.

### 4.1 - Setting the Output Levels

To select the Output Levels press the 'Toggle' switch.

The Display shows:



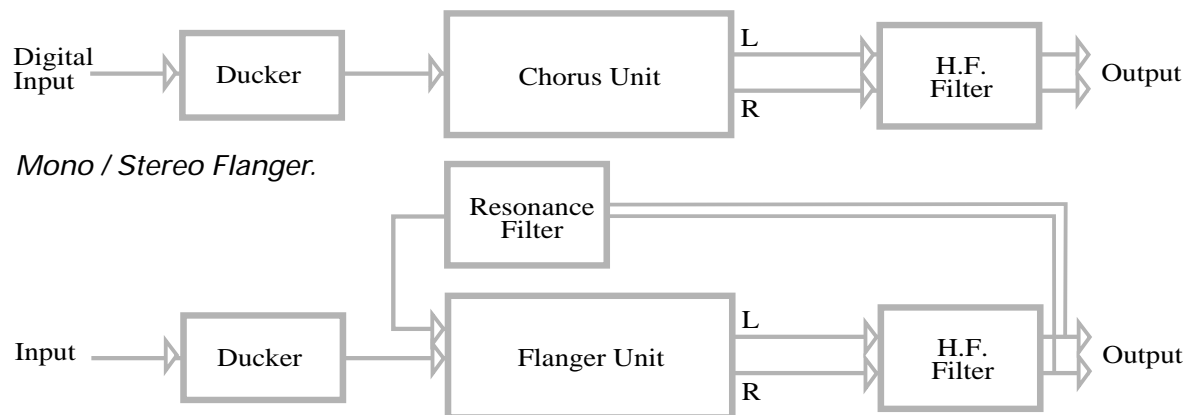
Use Data Control 1 to adjust the Direct Level.

Use Data Control 2 to adjust the Effects Level.

Press 'Toggle' again to return to the program number and name.

## Section 5 - Chorus/Flange Mode

Fig 2 : Chorus Only Mode : Mono / Stereo / 6 Voice Chorus.



Mono / Stereo Flanger.

The JFX-1 features five different types of Chorus, one of the most popular and widely used effects for guitar. Chorus is achieved by slightly delaying and de-tuning one or more of the delayed signals. Then by adding modulation the amount of de-tuning constantly varies.

Hence the ringing '12 string' type of effect normally associated with Chorus. By splitting the signal into stereo and delaying signals at different delay times (as

in the 6 - voice mode) the chorus becomes richer, thicker and more spacious.

Flanging follows the same principle but by re-feeding some or all of the already effected signal back on itself produces the classic swishing, tunnelled flanger sound.

The direct signal plays a vital part in these Time/Pitch type of effects as it is the difference between the direct and delayed signals which causes the effect.

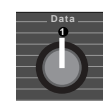
5.1 - Chorus/Flange Types (all selected using Data control 1).



**Mono Chorus** : A single voice chorus where the effect is the same at both the left and the right outputs.



**Stereo Chorus** : Here when the de-tuning effect is pitched sharp at one output it is pitched flat at the other and vice versa. This gives the effect extra depth and size.



**6 Voice Chorus** : By giving 6 voices slightly different delay times the effect is thickened and more pronounced.



**Mono Flanger** : Here the Resonance parameter is active in feeding the delayed signal back on itself. The same effected signal mixed with the direct signal appears at both the left and right outputs.



**Stereo Flanger** : For stereo flanging the delay effect is split left and right with one channel flanging up and the other flanging down.

### 5.2 - Chorus Parameters



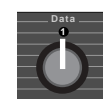
**Speed (0 - 9)** : Sets the speed at which the delayed signal is modulated from 'Slow' 0 to 'Fast' 9. The speed parameter is adjusted using the Data control 2.



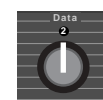
**Depth (00 - 99)** : Adjusts the depth of the de-tuned delayed signal. Lower settings give more subtle effects and higher settings give a more dramatic effect. The depth parameter is adjusted using the Data control 3.



To adjust the remaining parameters you must first press the 'Edit' button again.



**Resonance (00 - 99)** : The resonance control only operates on the flange selections and is controlled by the Data Control 1. The resonance parameter selects the amount of feedback in the flange selections. Lower settings give more subtle effects and higher settings give more dramatic effects.



**Filter (0 - 9)** : High frequency filter which rolls off some of the top end frequency to allow the emulation of early analogue type chorus effects.



The higher the setting - the greater the amount of H.F. attenuation. This parameter is adjusted using Data Control 2.



**Duck (00 - 99)** : Ducking allows you to momentarily lessen the amount of effect present in relation to the dry signal in order to keep the sound uncluttered and more intelligible. If for example you were using a high level of Chorus on a distorted sound you may want the initial note to remain almost unaffected, but as it decays require more effect to come in. This is where a high level of ducking would be required. The duck parameter is adjusted using Data Control 3.

### 5.3 - Creating a Chorus/Flange program.

Once you have scrolled through to an unnamed program (for example 50) using the Up and Down keys you must first set the levels of the Direct and Effects signals using the 'Toggle' button and Data Controls 1 and 2 (see Section 4.1).

Now you are ready to enter the 'Edit' mode.

The Display shows:



Use the Up key to move the cursor until it rests under 'Mode'.

The Display shows:



Press 'Edit' again.

The Display shows:



Use the Down key to select the Chorus only Mode.

The Display shows:



Press the 'Edit' key to enter the Chorus menu.

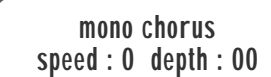
The Display shows:



Use the Down key to move the cursor until it rests under 'CHORUS'.

By pressing 'Edit' again the first set of Chorus parameters are displayed.

The Display shows:



Use Data Control 1 to select the Chorus / Flange (Mono Chorus / Stereo Chorus / 6 Voice Chorus / Mono Flanger / Stereo Flanger).

Use Data Control 2 to adjust the Speed parameter (0 - 9).

Use Data Control 3 to adjust the Depth parameter (00 - 99).

Press 'Edit' again to display the remaining programmable parameters.

The Display shows:



Use Data Control 1 to adjust the Resonance parameter (only available in Flange mode).



Use Data Control 2 to adjust the Filter parameter.

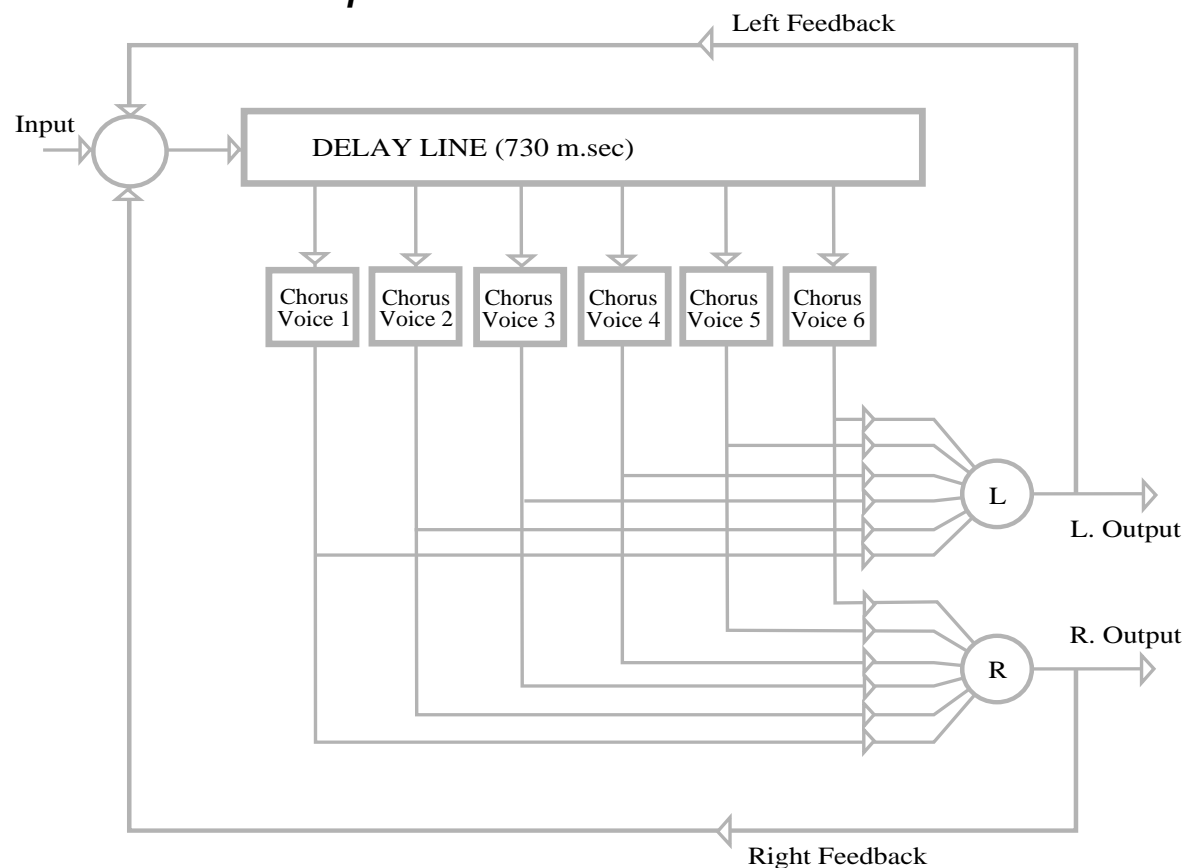


Use Data Control 3 to adjust the Duck parameter.



Once you are satisfied with the parameters that you have selected you will want to name and store the program. To do this you press 'Edit' to return you to the 'Chorus' menu. Now refer to sections 2.3 and 2.4 or 10 and 11 for naming and storing your program.

## Section 6 - Multi-Tap Mode



As the name suggests, Multi-Tap is a combination of multiple taps (voices) taken from a delay line where each voice has its own individually programmable set of parameters.

The JFX-1 features 6 stereo voices tappable from a delay line 730 milliseconds long, each with modulation to effectively give you the option of creating chorus/flange effects with or without delay.

In addition, by making each individual delay and its position within the stereo sound field programmable, you can create dramatic and uneven delay effects which span the full stereo spectrum.

### 6.1 Multi-Tap Parameters.

(Where the VOICE section is selected)

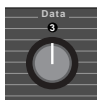
**Level (00 - 99)** Selects the relative level of each individual voice (1 - 6) and is adjusted using Data Control 1.



**Pan (0 - 9 Right & 0 - 9 Left)** Sets the stereo position of the individual voice in single step increments, taking 0 as the centre position and 9 as the full extremity left or right. The Pan parameter is adjusted using Data Control 2.

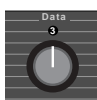


**Modulation (00 - 99)** The level of modulation selects the depth of the chorus effect on each voice. With the modulation at 00 no chorus effect will be present, which makes the voice purely a delay effect. The modulation parameter is adjusted using Data Control 3.



(Where the FEEDBACK section is selected)

**Feedback Left (00 - 99)** Selects the amount of effected signal fed back to the input from the left hand output.



The higher the setting, the greater the number of repeats. This parameter is adjusted using Data Control 2.

**Feedback Right (00 - 99)** Selects the amount of effected signal fed back to the input from the right hand output. Higher settings give a greater number of repeats and lower settings fewer. Adjusted by the Data Control 2.



Note : The feedback parameter operates on all 6 voices globally.

(when the DELAY section is selected)

**Delay Time (010 - 730 ms)** Selects the delay time for each of the 6 voices (010 - 730 ms) and is adjusted by using Data Control 3.



### 6.2 Creating a Multi-Tap Program

If you scroll through to an unnamed program (for example 51) using the 'Up' or 'Down' keys.

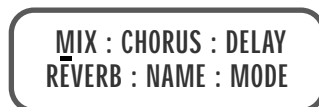
The Display shows:



To be able to hear the effect that you are about to program you must first set the output levels for the Direct and Effects signals (see section 4.1).

Having Toggled back into the program screen you should then press 'Edit'.

The Display shows:



Use the 'Up' and 'Down' keys to move the cursor until it rests under 'MODE'.

The Display shows:



Press 'Edit' again to display the Mode.

Then press the Down key until you reach Multi-Tap.

The Display shows:



Press 'Edit' to take you into the Multi-Tap menu.

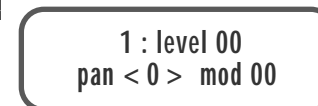
The Display shows:



Use the Down key to move the cursor until it rests under 'VOICE'.

Press 'Edit' to display the Voice parameters.

The Display shows:



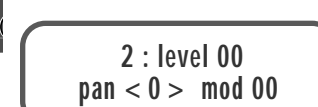
Use Data Control 1 to select the voice level (00 - 99).

Use Data Control 2 to select the stereo position of the voice (0 - 9 Right or 0 - 9 Left).

Use Data Control 3 to adjust the amount of modulation (00 - 99).

When you have completed the programming of Voice 1 use the 'Up' key to move to Voice 2.

The Display shows:



To display the remaining voices continue using the 'Up' key until all 6 are programmed (if desired), then press 'Edit' to return to the Multi-Tap menu.

Use the 'Up' key to move the cursor until it rests under FEEDBACK, then press 'Edit' again to display the feedback parameters.

The Display shows:



Use Data Control 2 to adjust the feedback to the left (00 - 99)

Use Data Control 3 to adjust the feedback to the right (00 - 99).

Press 'Edit' to return you to the main Multi-Tap menu.

Use the 'Up' key to move the cursor until it rests under DELAY.

Press 'Edit' to display the Delay time parameter.

The Display shows:

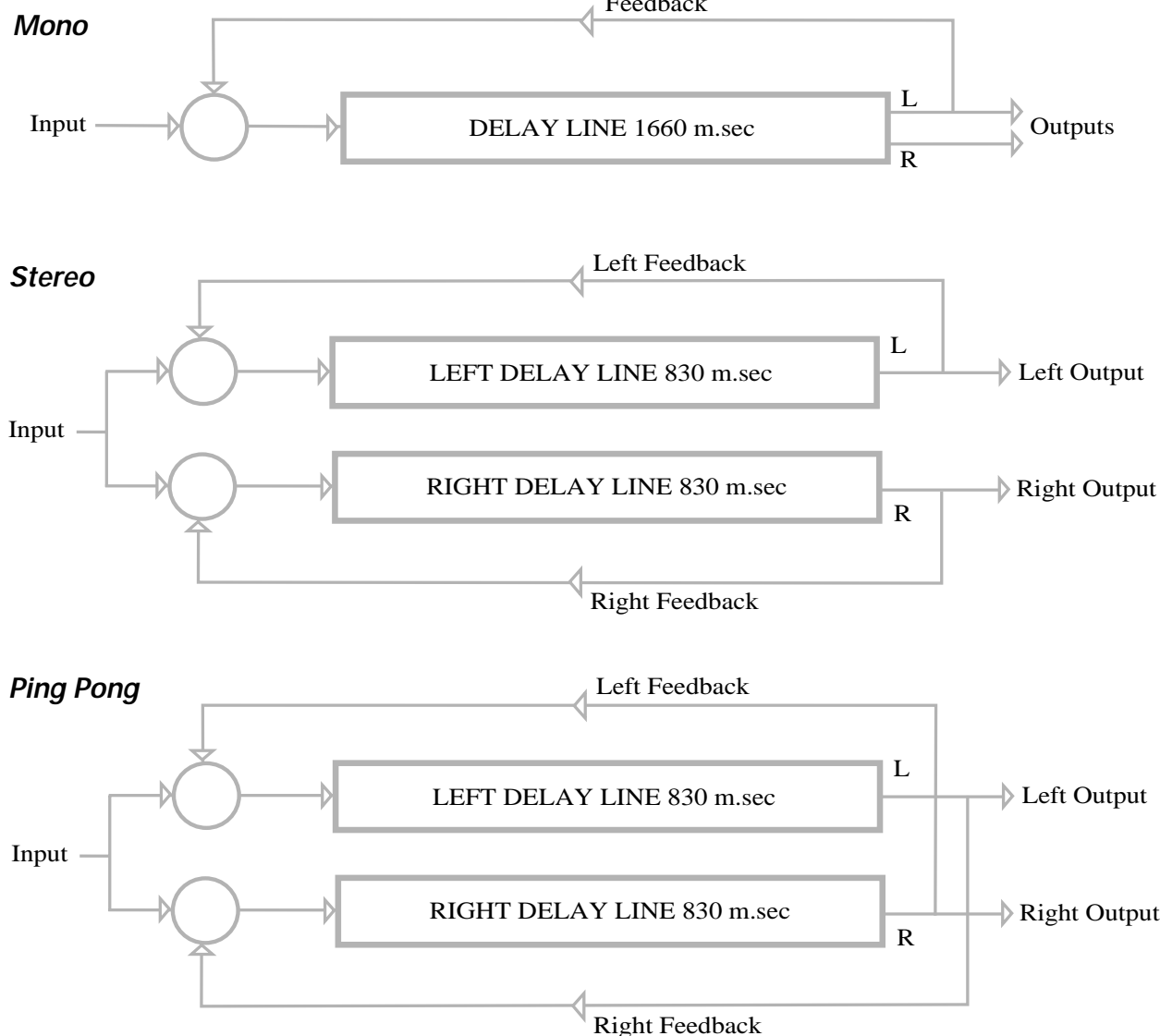


Use Data Control 3 to adjust the Delay time of Voice 1 (010 - 730ms).

The 'Up' key should be used to select the next voice and so on until all 6 voices are completed (where required).

Press 'Edit' to return to the Multi-Tap menu from where you can go on to store and name your program as described in sections 2.3 or 2.4 and sections 10 and 11.

## Section 7 - Delay Only Mode



Delay is produced when an accurate reproduction of the input signal is delayed for a specified time (usually in milliseconds), then fed back to the input to create controllable multiple repetitions.

The JFX-1 contains three different delay types to produce a multitude of high quality mono, stereo or ping pong delays.

### 7.1 - Delay types

The delay types are all selected using the Data Control ③.

**Mono** : The signal can be delayed up to 1660 milliseconds and appears at the left and right outputs in identical form.

**Stereo** : Here two separate delays can be assigned different lengths (up to 830 milliseconds) and feedback values for the left and the right hand signal.

**Ping Pong** : Two separate delays which can be individually varied have their outputs fed back to the input of the other side resulting in the delay 'bouncing' from side to side. The speed of this

left to right action is governed by the Delay time, the maximum of which is 830 milliseconds.

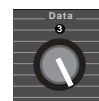
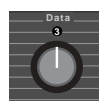
### 7.2 - Delay Parameters

**Delay Description** : Short, medium or long master selection for the delay time which ranges in Mono mode (Short 0000 - 0124 ms., Medium 0125 - 0500 ms., Long 0500 - 1660 ms.), in Stereo or Ping Pong mode left and right (Short 0000 - 0124 ms., Medium 0124 - 0500ms., Long 0500 - 830ms.). Adjusted using Data Control ①.

**Delay Time (0000 - 1660 Mono, 0000 - 0830 Stereo)**

Adjusts the length of the delay time between the master delay selection ranges in 5 ms. increments. In Stereo and Ping Pong modes this selection is available for both the Left and Right hand signals. Adjusted using Data Control ②.

**Delay Feedback (00 - 99)** : Adjusts the feedback level and hence the number of repeats. Higher settings give more repeats. This parameter is adjustable for both the left and right signals when in Stereo and Ping Pong modes. Adjusted using Data Control ③.



### 7.3 - Creating a Delay program

If you scroll through to an unnamed program (for example 52) using the Up or Down keys.

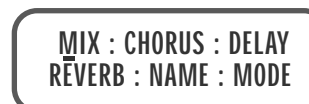
The Display shows:



You must first set the levels for the Direct and Effects signals (as shown in Section 4.1) in order to hear the effect you are about to program.

Having toggled back into the program screen you should then press 'Edit'.

The Display shows:



Use the Up key to move the cursor until it rests under **MODE**.

Press 'Edit' again to get into the Mode menu.

Press the 'Down' key until you reach the 'Delay only' selection.

The Display shows:



Press 'Edit' to take you into the Delay only mode.

The Display shows:



Use the 'Down' key until the cursor rests under **DELAY**.

Pressing 'Edit' now takes you into the delay parameters.

The Display shows:



Use Data Control ③ to select the delay type (Mono, Stereo or Ping Pong).

Press 'Edit' again to display the next set of parameters.

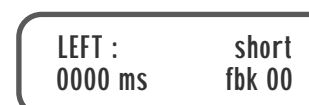
*In Mono Mode*

The Display shows:



*In Stereo or Ping Pong Mode*

The Display shows:



Use Data Control ① to select the delay description (Short, Medium or Long).

Use Data Control ② to select the exact delay time (0000 - 1660 in Mono, 0000 - 0830 in Stereo).

Use Data Control ③ to select the amount of feedback (i.e. the number of repeats (00 - 99)).

Pressing 'Edit' now takes you back into the Delay menu in Mono mode.

*In Stereo or Ping Pong mode.*

The Display shows:



You can now use the Data Controls to program the right hand delay.

Pressing 'Edit' again returns you to the Delay menu.

From this point you can now go on to store and name your program as described in sections 10 - 11 and 2.3, 2.4.





## Section 8 - Reverb



Natural reverberation occurs after a sound has been made in any enclosed space. The amount and type of reverberation depends entirely on the size of the space and the nature of the environment. For example hard surfaces such as wood or bare walls will give a different reflective character to softer surfaces such as curtaining etc. Reverb can be thought of as a multitude of echoes so densely spaced that the ear hears them as a continuous sound. As these sounds are absorbed and reflected by the surrounding boundaries so they die away or 'Decay'.

The JFX-1 emulates as many different reverberant spaces as you could possibly need, with great quality and uses a format which is very easy to edit.

### 8.1 - Reverb Types

The JFX-1 features four reverb types which are selected using Data Control 2.

**Room** : Which simulates the shorter reverb times presented by a room.



**Plate** : Simulates the 'Plate' type of Reverb used in the early days of recording. This electro-mechanical device involved suspending a thin piece of steel with a small speaker type device at one end. Transducer pick-ups placed at the other end would pick up the excitations delayed as they passed through the steel. Though the character of this type of reverb is most popular for vocal and drum tracks - it can also produce interesting effects for the guitar.



**Hall** : Much larger than a room, the reflections in a hall are much longer due to the higher ceiling and extra distance over which the sound has to travel.



**Large Hall** : The Large Hall setting extends the reflections even further and produces the simulation of huge spaces with very high ceilings and extra long decay characters.



### 8.2 - Reverb Characters

In addition to the four reverb types, the JFX-1 also contains four quite distinct programmable reverb characters. By careful adjustment of the frequency content of the decay we have made each character equate to a change in the reverb environment. They are selected using the Data Control 3.

**Dark** : By damping certain top end and low end frequencies this selection gives the effect of a heavily curtained and carpeted area where sound reflections would be heavily deadened.



**Warm** : Slightly less damping of top end and low end frequencies gives the atmosphere of a slightly deadened area where reflections would be softened.



**Standard** : Very slight damping of the top end frequencies provide the brighter character of an undampened area.



**Bright** : Slight damping of the low end frequencies give this selection the bright, vibrant character of a highly reflective area such as an uncovered wooden floor with bare walls.



### 8.3 - Reverb Parameters

**Reverb Decay** : Adjustable in single step increments (00 - 99) using Data Control 1, the reverb Decay parameter specifies how long the reverb signal will sound before completely dying out. The higher the parameter value the longer the decay - obviously this will also be affected by which type of reverb is selected.



**Decay shaping** : A second decay option is available which alters the slope of the decay without affecting the overall decay time. You can select this option using the 'Up' key and de-select using the 'Down' key.



### 8.4 - Creating a Reverb Program

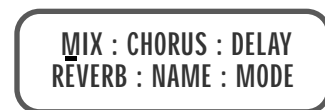
If you scroll through to an unnamed program (for example 53) using the 'Up' or 'Down' keys.

The Display shows:



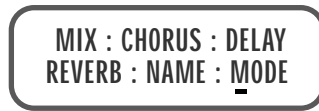
In order to hear the effect you are about to program you must first set the output levels for the direct and effects signals (see Section 4.1). Having toggled back from the output levels into the program screen, you should then press 'Edit'.

The Display shows:



Use the 'Up' key to move the cursor until it rests under MODE.

The Display shows:



Press 'Edit' again

The Display shows:



Press the 'Down' key until 'reverb only' appears.

The Display shows:



Press 'Edit' again to take you into the Reverb menu.

The Display shows:



Use the down key to move the cursor until it rests under REVERB, then press 'Edit' again to display the parameters.



The Display shows:



Use Data Control 1 to adjust the decay (range from 00 - 99).

Data Control 2 to select the type (Room, Plate, Hall & L.Hall).

Data Control 3 to select the character (Dark, Warm, Standard & Bright).

To select the decay shaping option press the 'Up' key.

The Display shows:

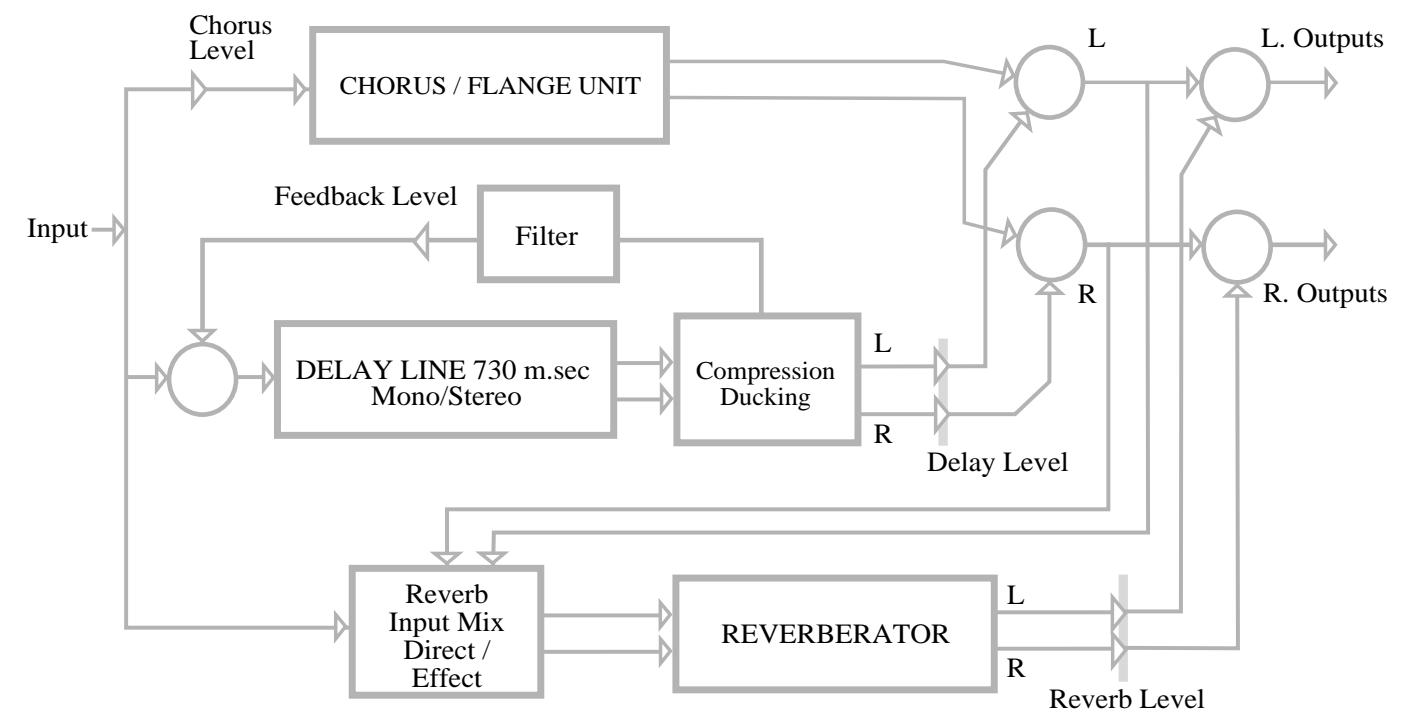


Pressing the 'Down' key returns the Reverb to normal decay mode.

Press 'Edit' to return to the Reverb menu.

If you are happy with the effect that you have programmed the next step is to name and store it. For these procedures see Sections 10 & 11 or the Quick Set-up guide 2.3 & 2.4.

## Section 9 - Multi-Effect Mode



## Multi-Effect Mode

The Multi-Effect section of the JFX-1 provides a combinable chain of effects including Chorus, Delay and Reverb selections. Any mixture of these three master effects can be blended together and shaped to suit the application.

The parameters for each effect in the multi-effect mode differ from those in the individual Chorus, Delay and Reverb only modes, but still offer comprehensive and effective control of these three vital and most widely used guitar effects.

### 9.1 - Multi-Effect Individual features

#### The Mix Section

Here you can blend together the relative amounts of Chorus, Delay and Reverb individually.

Data Control ① selects the level of the Chorus (00 - 99).

Data Control ② selects the level of Delay (00 - 99).

Data Control ③ selects the level of the Reverb (00 - 99).

#### The Chorus Section

The Chorus section features 4 different types of master chorus/flange selections. These are selected using Data Control ② as follows:

**Mode 1 - Mono Chorus** : Standard mono chorus where the same effect appears at both left and right outputs.

**Mode 2 - Stereo Flanger** : Modulation split so that as one side flanges up the other side flanges down.

**Mode 3 - Stereo Chorus** : Split so that as the de-tuning effect appears flat at one output it appears sharp at the other and vice versa.

**Mode 4 - 4 Voice Chorus** : 4 Slightly different delay voices modulated to give a thicker and fatter effect.

#### The Delay Section.

Two different types of delay with three different characters plus four degrees of compression and ducking are available in the Multi-Effect delay section. The two delay types are mono and stereo and are selected by Data Control ②.

**Mono Delay** : The delayed signal appears at the left and right outputs at exactly the same time.

**Stereo Delay** : In this mode a number appears as part of the stereo selection which corresponds to the amount of stereo spread the delay will receive.

On 00 the delay remains mono, on 99 one side comes in after 50% of the delay time of the other side has elapsed.

The three different delay characters are all selected using Data Control ③.

**Clean** : A minimum of high frequency damping keeps the delays vibrant and crystal clear.

**Warm** : Increased high frequency damping slightly softens the character of the delay.

**Dark** : Further high frequency damping darkens and softens the colour of the delay.

Adding compression to the delay is an excellent method of simulating early tape echo devices. Data Control ① provides four different degrees of compression. CMP1 gives just a hint of compression to CMP4 which gives a much deeper effect.

Ducking is a term used to describe the action of momentarily damping the amount of effect present in order to keep certain played passages more intelligible and less cluttered, the term refers directly to the effect actually 'ducking' out for a specified time. Data Control ① provides four different degrees of ducking where dck 1 gives short amounts of ducking to dck 4 which gives a longer amount

#### The Reverb Section

The Reverb section is based around a single multi purpose reverb with the decay time programmable.

The reverb also features a variable input mix between the direct and effected signal. This gives reverb on purely the direct signal at one extreme to purely the effected signal at the other.

The reverb input mix is adjusted using the Data Control ③.

### 9.2 - Multi-Effect Parameters

#### The Chorus Section

**Chorus Depth (00 - 99)** : Adjusts the amount of Chorus effect provided by the four master modes using Data Control ③.

#### The Delay Section

**Feedback (00 - 99)** : Adjusts the amount of delayed signal passed back through to the input and hence the number of repeats from very few on lower settings to a greater number on higher settings, The Feedback is adjusted using Data Control ①.

**Time (000 - 739 m.secs)** : Selects the length of the delay time from 000 - 739 m.secs. Data Control ② adjusts the time in 10 m.sec increments. Data Control ③ fine tunes the delay in 1 m.sec increments.

#### The Reverb Section

**Decay (00 - 99)** : Adjusts the depth of the reverb effect from short to long using Data Control ③.

### 9.3 - Creating a Multi-Effect Program

Scroll through to the next unnamed program (for example 54) using the 'Up' or 'Down' keys.

The Display shows:

PROGRAM  
054 : unnamed

You will need to set the output levels for the Direct and Effects signals in order to hear what you are programming using the 'Toggle' button and procedure as described in section 4.1.

Pressing 'Edit' once you have completed the toggle procedure, will take you directly into the multi-effect main menu screen.

The Display shows:

MIX : CHORUS : DELAY  
REVERB : NAME : MODE

Press 'Edit' again to take you into the MIX section.

The Display shows:

MIXER : chorus 00  
delay 00 rev 00

Use Data Control ① to adjust the Chorus level (00 - 99).

Use Data Control ② to adjust the Delay level (00 - 99).

Use Data Control ③ to adjust the Reverb level (00 - 99).

Press 'Edit' to return you to the main menu then use the 'Up' key to move the cursor along until it rests under CHORUS.

Pressing 'Edit' again takes you into the Chorus section.

The Display shows:

CHORUS :  
mode 1 depth 00

Use Data Control ② to select the Chorus mode (1 to 4).

Use Data Control ③ to adjust the Chorus depth (00 - 99).

Press 'Edit' again to display the main menu and use the 'Up' key to move the cursor until it rests under DELAY.

Pressing 'Edit' once more will take you into the Delay section.

The Display shows:

DELAY TYPE :  
mono : clean

Use Data Control ① to set the level of compression or ducking on the delay (1 to 4 for each).

The Display shows:

DELAY TYPE : dck 1  
mono : clean

Use Data Control ② to select the type of delay. As Data Control ② is turned the delay selection changes to stereo (01 - 99).

The Display shows:

DELAY TYPE : dck 1  
stereo 01 : clean

Use Data Control ③ to select the character of the delay (Clean, Warm & Dark).

Press 'Edit' again to display the remaining delay parameters to be programmed.

The Display shows:

DELAY : fbk 00  
time 000 m.sec

Use Data Control ① to adjust the amount of feedback (00 - 99).

Use Data Control ② to adjust the delay time in 10 m.sec increments (000 - 730 m.secs).

Use Data Control ③ to adjust the delay time in single step increments between the master time set using Data Control ② (0 - 9).

Press 'Edit' again to display the main menu.

The 'Up' key should now be used to move the cursor until it rests under REVERB.

Press 'Edit' again to take you into the Reverb section.

The Display shows:

REVERB :  
decay 00

Use the Data Control ③ to adjust the reverb decay level (00 - 99).

Press 'Edit' again to display the remaining reverb parameters to be programmed.

The Display shows:

REVERB INPUT MIX  
Dir < > Eff

Use Data Control ③ to select 8 different balances of reverb on the direct/effects signal. At one extreme the reverb will only act on the direct signal, at the other extreme the reverb will only act on the effected signal with the 6 points in between offering relative levels of each.

Press 'Edit' to return you to the main multi-effect menu from where you can go on to store your program (see section 10, 11 or 2.3, 2.4).

## Section 10 - Naming an Edited Program

Although not essential it is a useful idea to name your programs as soon as you have created them to avoid losing them or forgetting where they are stored.


As with the other programming functions of the JFX-1 the naming procedure is simple and straight forward - Let us use program 054 as an example.

Once back to the main menu of any of the five effects modes you should use the 'Up' or 'Down' keys to move the cursor until it rests under NAME.

Then press 'Edit'.

The Display shows:

NAME :  
054 : unnamed

Use the 'Up' key to move the cursor under the letter to be altered then use Data Control  to select the desired letter or number.

The furthest extreme to the left provides a space then as you turn the control it scrolls through the alphabet, first in capital letters, then in lower case letters and finally in numbers 0 - 9.

There is room for 12 characters in the name.

To store the name you should press the 'Store' key.

The Display shows:

STORE PROGRAM  
at 054

Pressing 'Store' a second time completes the store and returns you to the program menu.

## Section 11 - Storing a Program

Once you are totally satisfied with the effect that you have programmed, you should name it, though this is not essential at this stage, before storing into the memory for future recall.

Press the 'Store' key.

The Display shows:

STORE PROGRAM  
at 054

If you wish to store the program at the location displayed press 'Store' again to complete the process.

The Display shows:

PROGRAM  
054 : your new name

If you wish to store the program to a different location use the 'Up' and 'Down' keys to select the new program number before pressing 'Store' for the second time.

On completing the store process - the red Edit LED will switch off.

## Section 12 - The System Menu

The system menu of the JFX-1 gives you access to the programming of the remote jack, the MIDI menu and the battery level indicator.

### 12.1 - The Remote Jack

If you are using the JFX-1 with an amplifier head or combo which features channel switching the remote jack can be used to trigger the channel switch instead of the usual floor mounted footswitch. Also if you are using a power amp such as the Marshall 9100 or 9200 which has a switchable voicing option, again the remote jack can be used to trigger this option.

When you switch the JFX-1 on for the first time, the remote jack will automatically be in the off setting on all programs, so should therefore be considered for storage as part of your normal programming procedure.

When you reach a program for which you want to access the remote jack.

Press the 'System' key.

The Display shows:

SYSTEM MENU  
REMOTE : MIDI : BAT

Press the 'System' key again

The Display shows:

REMOTE JACK  
off

Use the 'Up' key to change the selection to 'On' (a slight click may be heard from inside the JFX-1).

Press the 'Store' key to retain the remote selection in the memory.

Now whenever you select that program the channel on your amp or combo will change accordingly, provided that the remote jack was left in the 'Off' position on the previous program selection.

### 12.2 - MIDI Operation and Functions

The purpose of MIDI (Musical Instrument Digital Interface) is to provide a common system of communication between different pieces of musical equipment which contain MIDI as part of their digital control system.

It allows tremendous control and flexibility where one source can control numerous items linked in the chain via MIDI. For example in a guitar rack system a MIDI foot controller could link into a processor such as the JFX-1 which in turn could be connected to a guitar pre-amp (such as the JMP-1). This would give you instant access to 128 different sounds with the possibility of different effects for each sound if you so desire.

With the wealth of MIDI controlled equipment available today, the possibilities are limitless.

The MIDI section of the JFX-1 contains certain parameters which are global (i.e. they are not individually stored as part of a program and therefore affect all programs).

However, functions such as the MIDI Controller selections are available for each program and as such will need to be stored as part of your programming procedure if you wish to use them.

### 12.3 - MIDI Channel

You can select the channel on which the JFX-1 will receive MIDI commands from 1-16 or omni (receiving all channels simultaneously).

The JFX-1 transmits it's own MIDI commands on MIDI channel 1.

The JFX-1 is factory set to receive it's MIDI commands on all channels (Omni) but if you wish to select a particular channel the procedure is as follows.

Press the 'System' key.

The Display shows:

SYSTEM MENU  
REMOTE : MIDI : BAT

Use the 'Up' key to move the cursor until it rests under MIDI.

Press the 'System' key again.

The Display shows:

MIDI CHANNEL  
omni

Use the 'Up' key to scroll through the MIDI channels 01 - 16 and the 'Down' key to scroll back again.

This is a global function, therefore will not need to be stored.

### 12.4 - Input and Output Mapping

The input and output mapping of the JFX-1 allows you to select the internal program number which will be called up by an external MIDI command and in turn select the outgoing program number sent by the JFX-1.

You only need the mapping function if you wish to change the destination of an incoming or outgoing MIDI command as the JFX-1 is automatically set-up to sequentially follow incoming MIDI commands (i.e. incoming command 001 will automatically select JFX-1 program 001 and so on).

To gain access to the mapping function you first press the 'System' key to display the system menu.

Use the 'Up' key to move the cursor until it rests under MIDI.


Pressing the 'System' key again will display the MIDI Channel function.

Press the 'System' key again.

The Display shows:

INPUT MAPPING  
000 to 000

Use the 'Up' and 'Down' keys to scroll through to select the incoming MIDI command number (both numbers will change in tandem (000 - 127)).

Use Data Control  to select the internal program number to be called up from (000 - 127).


Press the 'System' key again to display the Output Mapping function.

The Display shows:

OUTPUT MAPPING  
000 to 000

Note : The numbers displayed will correspond to the last number selected in the Input Mapping functions).

Use the 'Up' or 'Down' key to select the internal program number (both numbers will change in tandem 000 - 127).

Use Data Control  to select the outgoing MIDI program number (000 - 127).

There is no need to store input and output mapping numbers as they are automatically stored as you press the System, Edit or Quit keys.

### 12.5 - MIDI Controllers

For live performance it can be beneficial to be able to adjust certain program parameters remotely via a pitch wheel or expression pedal.

Each of the 127 programs in the JFX-1 can have up to four parameters assigned for continuous control. Each effects mode features a selection of assignable parameters from which you can choose the most useful for your needs (see 12.6 for listing of MIDI controller parameters available for each mode).

To program the MIDI controllers you must first enter the system menu by pressing the 'System' key.



Use the 'Up' key to move the cursor until it rests under MIDI.



Press the 'System' key four times to take you through the MIDI channel, Input mapping and Output mapping selections.



The Display shows:



Use the 'Up' and 'Down' keys to select the internal number of the parameter to be controlled (1 -4).



Use the Data Control to select the external MIDI controller number (off and 000 - 121).



Note : The JFX-1 leaves the factory with all the MIDI control numbers in the 'Off' position.

Use Data Control to select the individual parameter to be controlled.



Note : In certain effects modes there are a greater number of parameters available than the four allocated to each program. In this case you should scroll through using Data Control before making your selection.



Finally you will need to store the selected MIDI Controllers for the individual program by pressing the 'Store' key.



The Display shows:



If you are happy with the location displayed press 'Store' again to complete the process.



### 12.6 - MIDI Controller Parameters for each mode

The following list displays which parameters are available for continuous control in each mode, gives you their value plus the abbreviated form and order in which they appear on the LCD display.

|              | Parameter Name | Value         | Abb. Description |
|--------------|----------------|---------------|------------------|
| Chorus Only  | Direct Level   | 00 - 99       | direct lvl       |
|              | Effect Level   | 00 - 99       | effect lvl       |
|              | Speed          | 0 - 9         | speed            |
|              | Depth          | 00 - 99       | depth            |
|              | Resonance      | 00 - 99       | resonance        |
|              | Filter         | 0 - 9         | filter           |
|              | Ducking        | 00 - 99       | ducking          |
|              | Remote Jack    | on / off      | remote           |
| Multi Tap    | Direct Level   | 00 - 99       | direct lvl       |
|              | Effect Level   | 00 - 99       | effect lvl       |
|              | Remote Jack    | on / off      | remote           |
| Delay only   | Direct Level   | 00 - 99       | direct lvl       |
|              | Effect Level   | 00 - 99       | effect lvl       |
|              | Delay Time *   | 0000 - 1660ms | dly time         |
|              | Feedback *     | 00 - 99       | feedback         |
| Reverb Only  | Direct Level   | 00 - 99       | direct lvl       |
|              | Effect Level   | 00 - 99       | effect lvl       |
|              | Remote         | on / off      | remote           |
| Multi-Effect | Direct Level   | 00 - 99       | direct lvl       |
|              | Effect Level   | 00 - 99       | effect lvl       |
|              | Chorus Level   | 00 - 99       | chorus lvl       |
|              | Delay Level    | 00 - 99       | delay lvl        |
|              | Reverb Level   | 00 - 99       | reverb lvl       |
|              | Delay Time     | 000 - 739     | dly time         |
|              | Feedback       | 00 - 99       | feedback         |
|              | Chorus Depth   | 00 - 99       | chrs depth       |
|              | Reverb Decay   | 00 - 99       | rvb decay        |
|              | Remote Jack    | on / off      | remote           |

\* Mono Only

### 12.7 - System Exclusive Back-up

If you have access to a data file, sequencer or other external MIDI storage device you may wish to download the programmed data from your JFX-1 using the System Exclusive Back-up. You could also use the 'Back-up' function to transfer data between two JFX-1 units.

You would need to connect a standard MIDI cable from the MIDI OUT of the JFX-1 to the MIDI IN of the receiving device.

Press the 'System' key to get into the System menu.



Use the 'Up' key to move the cursor until it rests under MIDI.



Press the 'System' key a further five times to take you into the System Exclusive Back-up display.



The Display shows:



Press the 'Up' key to start the back-up.



The Display shows:



The three digits at the end of the display will automatically scroll through until they reach '111' which completes the back-up.

The display reverts to the System Exclusive Back-up mode.

#### Reloading the Memory

To reload the stored information from an external MIDI device you should connect the MIDI OUT of the transmitting device to the MIDI IN of the JFX-1.

Press the 'System' key to get into the System menu.



Use the 'Up' key to move the cursor until it rests under MIDI.



Use the 'System' key to scroll through the other MIDI functions until the 6th selection is made.



The Display shows:



Use the 'Up' key to ENABLE the System Exclusive and the 'Down' key to DISABLE it.



Note : The JFX-1 is factory set with the system exclusive DISABLED. It is a wise precaution to ensure that the system is returned to the DISABLED mode after information has been downloaded.

**WARNING :** Receiving a MIDI dump will re-write all your existing program and mapping data - if you are unsure that the data you are loading is correct make a back-up of your current data before re-loading. The JFX-1 will only receive a data re-load with the System Exclusive ENABLED.

When you start re-loading, the JFX-1 will automatically default to the System Exclusive in progress display.

The Display shows:



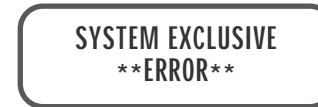
The three digits will automatically progress in sequence up to '111' until the re-load is complete.

The Display shows:



If there is an error in the MIDI data, The JFX-1 will abandon the load.

The Display shows:



In this instance you could try the re-load again, the error could be due to a file corruption or a faulty cable.

### 12.8 - Battery Level

The final function of the System menu is to provide an indication of the internal battery power level.

The battery should provide sufficient power to maintain the memory for a number of years but the level should be checked periodically as follows.

Press the 'System' key to enter the System menu.



Use the 'Up' key to move the cursor until it rests under BAT.



Press the 'System' key to display the battery level.



The Display shows:



When the battery level becomes low-

The Display shows:



You should now make arrangements to return the JFX-1 to your nearest authorised service centre for battery replacement and also back-up your programs.

### Section 13 - Re-Initialising the JFX-1

If at any time you wish to restore the programmed information within the JFX-1 to the same condition in which it left the factory it is possible to re-initialise it.

There are two types of re-initialisation:

1. For all 127 programs where the 50 factory pre-sets would be restored to their original format and the remaining programs are completely cleared.

2. Restoring the first 50 factory pre-sets without affecting data programmed into programs 50 - 127.

**Warning :** As re-initialisation clears all custom programmed information you must make a back-up or written note of any program information you wish to keep.

To restore programs 00 - 49 (leaving programs 50 - 127 untouched).

Press the 'Store' button as you switch the power on.



To re-initialise the whole system including restoring the 50 factory pre-set programs, clearing the remaining memories and re-setting the mapping table.

Press the 'Down' key and 'Store' key as you switch the power on.



The JFX-1 will now have it's memory configured to the same specification as that with which it originally left the Marshall factory.

### Section 14 - JFX-1 Specifications

Frequency Response : 20 Hz - 20 KHz + or - 1dB

Dynamic Range : 94dB

Processing : 24 bit

Storage / Converters : 16 bit

Input Impedance : 470 K

Output Impedance : 470 Ohms.

### Section 15 - Factory Pre-Sets

| Program No. | Name              |
|-------------|-------------------|
| 000         | BYPASS            |
| 001         | concert hall      |
| 002         | bright plate      |
| 003         | dark plate        |
| 004         | live room         |
| 005         | chs - dly - rev 1 |
| 006         | chs - dly - rev 2 |
| 007         | st - chorus       |
| 008         | st - flange       |
| 009         | ping - pong 1     |
| 010         | ping - pong 2     |
| 011         | ping - pong 3     |
| 012         | chs - rev 1       |
| 013         | chs - rev 2       |
| 014         | chs - rev 3       |
| 015         | space echo -1     |
| 016         | space echo -2     |
| 017         | multi - tap 1     |
| 018         | multi - tap 2     |
| 019         | multi - tap 3     |
| 020         | multi - tap 4     |
| 021         | garage            |
| 022         | theatre           |
| 023         | blues room        |
| 024         | big reverb        |
| 025         | 800 m. sec        |
| 026         | 1660 m. sec       |
| 027         | 200 - 220 m. sec  |
| 028         | 400 - 420 m. sec  |
| 029         | 800 - 820 m. sec  |
| 030         | st - double       |
| 031         | flange - dly      |
| 032         | flange - echo     |
| 033         | chorus blues      |
| 034         | flange blues      |
| 035         | ambience          |
| 036         | mod - delay       |
| 037         | six voice 1       |
| 038         | six voice 2       |
| 039         | memory man        |
| 040         | delay duck        |
| 041         | metal chorus      |
| 042         | metal flange      |
| 043         | country slap      |
| 044         | fade left         |
| 045         | fade right        |
| 046         | rhythm tap 1      |
| 047         | rhythm tap 2      |
| 048         | chs - rvb - dly 3 |
| 049         | chs - rvb - dly 4 |

### Section 16 - MIDI Implementation Chart

| Function             |  | Transmitted   | Recognised         | Remarks                             |
|----------------------|--|---|--------------------|-------------------------------------|
| Basic Channel        | Default<br>Altered   | 1<br>1 - 16   | Omni<br>1 - 16     | Memorised                           |
| Mode                 | Default<br>Message<br>Altered                                  | x<br>x<br>x   | Mode 1<br>x<br>x   |                                     |
| Note Number          | True Voice   | x<br>x  | x<br>x             |                                     |
| Velocity             | Note ON<br>Note OFF  | x<br>x  | x<br>x             |                                     |
| After Touch          | Key's<br>Channels  | x<br>x  | x<br>x             |                                     |
| Pitch                | Bender   | x   | x                  |                                     |
| Control Change       |  | x   | 0                  |                                     |
| Program Change       | True   | 0 - 127<br>0 - 127  | 0 - 127<br>0 - 127 | Input / Output Mapping Programmable |
| System Exclusive     |  | 0   | 0                  | * See Note                          |
| System Common        | : Song Pos<br>: Song Sel<br>: Tune                             | x<br>x  | x<br>x             |                                     |
| System Real Time     | : Clock<br>: Commands  | x<br>x  | x<br>x             |                                     |
| Aux. Messages Common | : Local ON/OFF<br>: All Notes OFF<br>: Active Sense<br>: Reset | x<br>x<br>x<br>x  | x<br>x<br>x<br>x   |                                     |
| * Notes              |  | System Exclusive Recognised when System Exclusive is enabled. |                    |                                     |

Mode 1 : OMNI ON, POLY  
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON, MONO  
Mode 4 : OMNI OFF, MONO

0 : Yes  
x : No