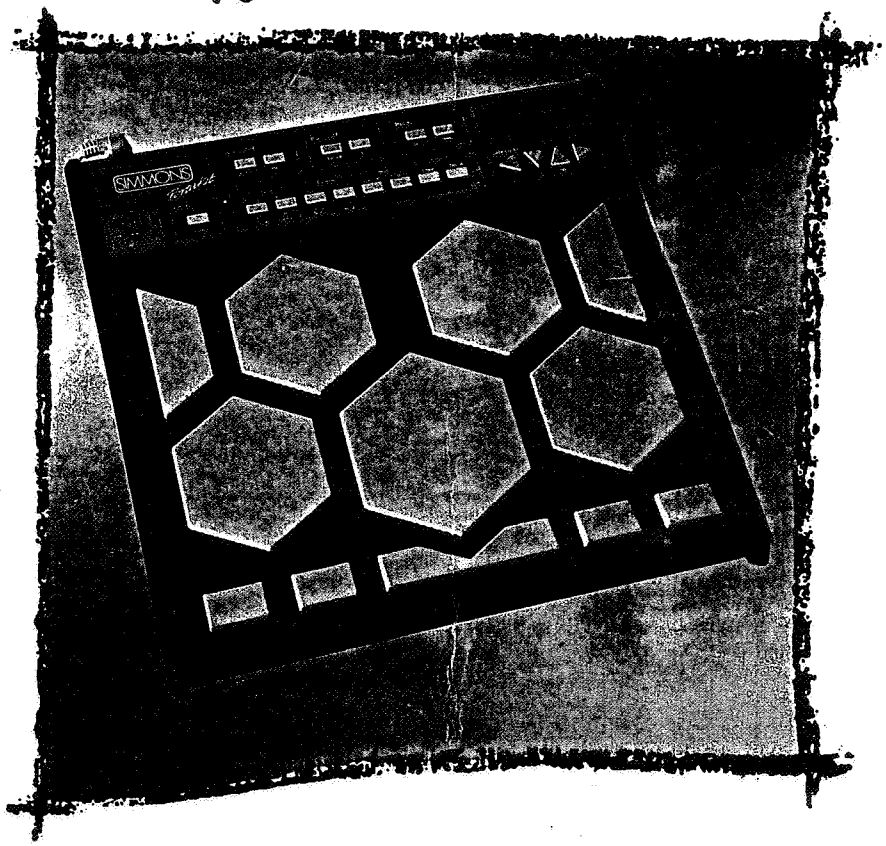
C R E A T I V E U S E O

SIMMONS

PortaKit



SIMMONS

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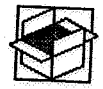


CONCEPT

PORTAKIT

PortaKit offers much more than a convenient way to trigger the sounds of MIDI Drum Machines and Samplers in a compact Kit format. Add Bass drum and Hi-Hat pedals and you can access a total of 14 playing surfaces in one portable package. Force sensing film technology combined with a high-bounce rubber playing surface means no cross-talk between Pads and ensures a lively stick response. You can even choose a Dynamic Curve for each Pad to suit your playing style.

MIDI Effects such as Pitch Bend, After Touch and Control Changes can also be generated by one of the Pads. The amount of the effect produced is proportional to the pressure you exert.

50 Kit Memories allow you to store MIDI Notes, Durations, Dynamic Curves and MIDI Channels for each of the 14 Pads. In addition, you can store Program Changes, a MIDI Effect and Tempo for the Kit. Kits are recalled at the touch of a button, or external footswitch.

For live use you can pre-program the Kits you want to use in one of 20 Song Memories and combine these with MIDI Start, Stop and Continue Commands along with MIDI Song Selects to reconfigure your entire MIDI set-up in seconds.

An on-board, polyphonic Sequencer lets you record and overdub complex rhythm tracks. 12 Sequences can be recorded. PortaKit will read and generate MIDI Clocks making sure that you stay in sync with the rest of the world.

Last, but certainly not least, 6 External inputs, coupled with Simmons' unique LEARN™ facility enable you to cleanly trigger MIDI devices from Simmons Pads, Tape Signals or even Acoustic Drums Mics.

Altogether PortaKit can form the basis of the most sophisticated MIDI set-up in one portable unit. We hope that when you play PortaKit, you'll get carried away...

PACKING LIST

SUPPLIED

After unpacking your PortaKit, check that you have been supplied with the following components :

1	PortaKit Console
1	Mains Lead
1	MIDI Lead
1	PortaKit User Manual

OPTIONAL

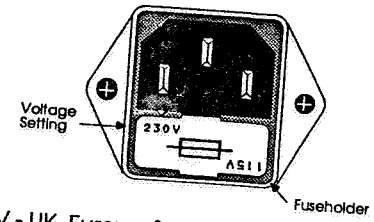
The following options are available for the PortaKit and can be supplied by your Simmons Dealer :

Stand Mounting Bracket	PMB1
6 Acoustic Trigger Bugs	STB6
Sprung HI-Hat Pedal	SFP1
Sprung Effect Pedal	SFP1
Start/Stop Footswitch	DFS2
Inc/Dec Footswitch	DFS1
Leads	

BEFORE YOU START

SELECTING THE CORRECT VOLTAGE

Before you do anything check that the voltage setting, located under the mains socket inlet indicates that the correct voltage setting has been selected for your area.



230V - UK, Europe & Australia
115V - USA, Canada & Japan

If you have to change this setting, it can be accomplished as follows ....

- Remove the IEC mains lead from the socket.
- Insert a small, flat-bladed screwdriver into the slot between the socket inlet and the Fuseholder and lever the Fuseholder free.
- Remove the Fuse and replace it with the correct Rating.
- Rotate the Fuseholder until the correct Voltage legend is upright.
- Push the Fuseholder fully home.
- The correct Voltage legend should now be next to a small pointer moulded next to the slot under the socket inlet.

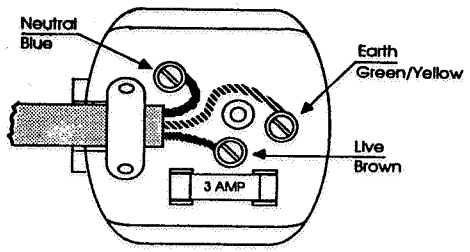
The Fuseholder has a small compartment, behind the legend, which you can use to hold a spare Fuse, or an alternative one if you travel regularly.

CONNECTING TO THE MAINS

European Mains voltages

Connect an appropriate mains plug to the mains cable according to the following colour code.

Brown - Live
Blue - Neutral
Green/Yellow - Earth (Ground)



CHANGING THE FUSE

The Fuse is located in a holder under the IEC connector. If you have to replace the Fuse for any reason, make sure that you replace it with the correct rating, according to the following Voltage settings.

230V - 250mA(T) Anti-Surge
115V - 500mA(T) Anti-Surge

Replace the Fuse as follows ...

- Remove the IEC mains lead from the socket.
- Insert a small, flat-bladed screwdriver into the slot between the socket cavity and the Fuseholder and lever the Fuseholder free.
- Replace the blown Fuse with a new one.
- Push the Fuseholder fully home.
- The correct voltage legend should be next to a small pointer moulded next to the slot under the socket cavity.

If the Fuse blows repeatedly, refer the unit to your local Simmons Service Centre.

LOOKING AFTER PORTAKIT

PortaKit is a computer-based instrument and as such should be treated with care. A few simple rules, if followed, will avoid problems in the future.

Try and use a clean power source, away from equipment that may produce transient spikes through the mains, i.e. electric motors, heavy switch gear etc. These are unsympathetic to electronic music products.

PortaKit is supplied with a three core power lead. Make sure that the instrument is always Earthed, by connecting to a grounded AC power source.

Do not place the PortaKit on top of speaker cabinets or amplifiers which might subject it to excessive vibration or heat.

Do not subject the PortaKit to sudden shocks, such as dropping it !

CONNECTING UP

PortaKit interfaces with the world through a number of sockets situated on the Rear Panel. A detail of the Rear Panel is shown on page 12. The function of each of these sockets is described below ...

EXTERNAL INPUTS

Six External Inputs can be connected. These can be either Piezo signals, as produced by standard Simmons Pads, or Audio Signals from Tape or Acoustic mics.

The LEARN™ function is used to match the External Input connected. As well as allowing the Gain to be adjusted this function samples the Input signal to create a software model of its decay envelope. You can therefore connect a wide range of Inputs, while allowing PortaKit to do the hard work of creating a clean trigger.

Apart from Bass which is an additional Input, connecting an External Input will disconnect the relevant Playing Surface.

All Inputs are 1/4" Mono Jacks

MIDI

MIDI IN

A MIDI IN socket permits the following :

Select Kits with MIDI Program Changes
Synchronize to an external MIDI Clock
Merge Data from another PortaKit
Load System Excusive Memory Dump

MIDI OUT 1

All MIDI data generated by the PortaKit is transmitted from this socket. When the MERGE function is enabled, MIDI Information received at MIDI In will be merged with that produced from the Pads.

MIDI OUT 2 / THRU

This socket can be used as a second MIDI Output allowing two MIDI instruments to be connected directly. Alternatively it can be switched to MIDI THRU, providing a buffered version of the MIDI In data, thus allowing instruments to be chained.

FOOT CONTROLS

HI-HAT

The HI-Hat Pad has two sets of MIDI Parameters, one Open the other Closed. The position of the Hi-Hat Pedal allows the Open or Closed parameters to be selected. Also produces a closed trigger when pushed down.
1/4" Mono Jack.

EFFECT

An Effect Footpedal can be connected and used as well as, or instead of, the CymFX Pad to transmit MIDI Effects.
1/4" Mono Jack.

START/STOP

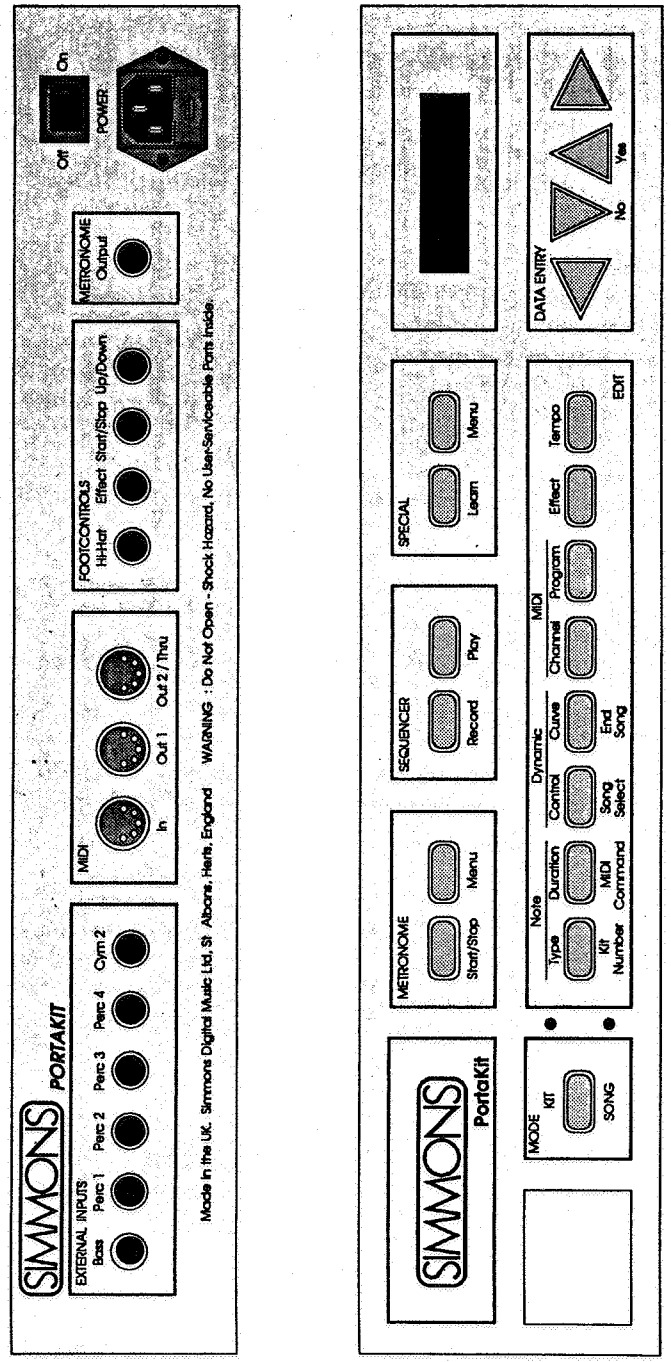
A Single Footswitch may be connected which duplicates the function of the Start/Stop control on the front panel. This would normally be used to remotely Start or Stop a Drum Machine from the PortaKit.
1/4" Mono Jack. Switch to Ground to activate.

UP/DOWN

A Double Footswitch may be connected which duplicates the function of the Up and Down controls on the front panel. This would normally be used to remotely step through the Events in a Song.
1/4" Stereo Jack. Switch to Ground to activate.

METRONOME

An Audio Output is provided which enables the internal Metronome to be amplified through a Mixer Desk.
1/4" Mono Jack.



GETTING STARTED

POWER UP

Power-up the PortaKit by flicking the mains button on the rear panel to ON. The LCD should glow a green/blue colour and display the following message :

```
SIMMONS 88
PortaKit Ver X.X
```

After a couple of seconds the Metronome will Beep the display will change to something like the following :

```
KIT:01 DemoKit
FX=Off      ♩:120
```

PortaKit always powers up in Kit Mode. The current Kit number is shown flashing along with the Effect Pad setting and Metronome Tempo.

DISPLAYS

The 16 character by 2 line Liquid Crystal Display, with EL backlight, is used to display all user information.

In addition, two LED's situated between the MODE and EDIT boxes indicate whether the unit is in KIT or SONG Mode. These are bi-colour LED's which glow green in Play Mode or red in Edit Mode.

USER CONTROLS

All the Control buttons are moulded in rubber, like the Pads, but produce a Beep when pressed. You can disable this, if you wish, by turning **KeyClick** Off. This function is available from the Special Menu.

A detail of the Front Panel is shown on the opposite page. The function of each of the User Control buttons is described below ...

METRONOME

Start/Stop
Starts or Stops the Internal Metronome. When enabled, MIDI Start and Stop Commands, along with MIDI Clocks at the current Tempo, can also be generated.

Menu
Selects the Metronome Menu. This allows access to all the timing related functions for the Metronome and Sequencer.

SEQUENCER

Record
Allows one of the 12 Sequences to be Recorded or Overdubbed.

Play
Allows one of the 12 Sequences to be Played back.

SPECIAL

Learn
Selects the Special Function which allows PortaKit to Learn the Profile, or Envelope Shape, of the External Inputs.

Menu
Selects the Special Menu. This allows access to the Utility Functions and Global settings for the instrument.

MODE

or

Kit/Song
Selects the KIT or SONG Mode.
The upper LED will light in KIT Mode and the lower LED will light SONG Mode.

EDIT

The 8 buttons in the Edit section allow a Kit or Song to be edited, depending on the current Mode. When the upper LED is on the unit is in KIT Mode and the buttons allow access to the Kit parameters which are printed above the buttons. When the lower LED is on the unit is in SONG Mode and the buttons allow access to the Song parameters which are printed below the buttons.

DATA ENTRY

All Data Entry is performed using the four buttons under the LCD.

Up/Down

The Up and Down buttons are used to increase or decrease the value of the Active Region. They have a pressure-controlled repeat rate, that is, the harder you press the faster they auto-repeat.

Left/Right

The Left and Right buttons are used to move left or right round the Active Regions. They do not repeat when held down.

USING THE DATA ENTRY CONTROLS

If you have not pressed any other button since you powered-up the display should be something like this ...

```
KIT:01 DemoKit
FX=Off      ♩:120
```

Every screen displayed on the LCD has one or more **Regions** which can be selected. A Region can be a Number, Name or Function, however, only one can be **Active** at any time. The Active Region is shown flashing, indicating that it can be adjusted using the **Up** and **Down** buttons. (Throughout this Manual the flashing Region will be indicated by reversed text.) Pressing the **Right** or **Left** buttons moves to the next or last Region.

In this display there are two Regions, the **Kit Number** and the **Tempo**. At the moment the Kit number is flashing, or Active.

Try pressing the Up button.

The Kit number changes ...

```
KIT:02 NextKit
FX=Off      ♩:120
```

Now hold down the Up button. After half a second or so the number will start to auto-repeat. The harder you press the faster is repeats.

Hold the Down button to bring the selected Kit back to 1.

Press the Right button.

The Tempo now flashes indicating that it is Active ...

```
KIT:01 DemoKit
FX=Off      ♩:120
```

Use the Up or Down buttons to select an alternative Tempo.

If you press the Right button the Kit number will flash again.

```
KIT:01 DemoKit
FX=Off      ♩:120
```

Press the Left button and you move back to the Tempo.

```
KIT:01 DemoKit
FX=Off      ♩:120
```

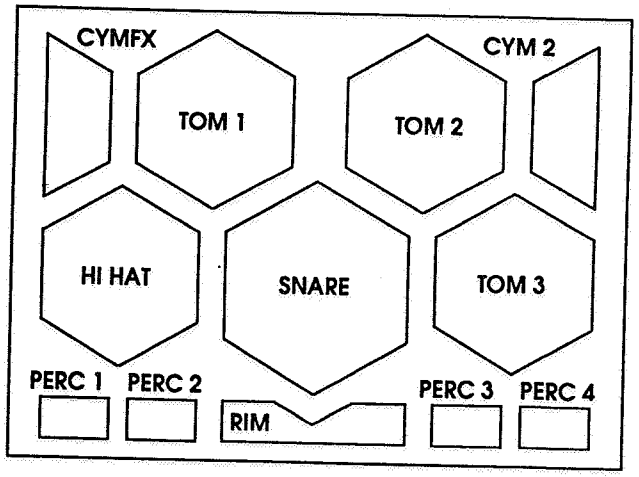
These four buttons are fundamental to the operation of the PortaKit. You should experiment with them until you are comfortable with their function.

PLAYING SURFACES

PortaKit basically performs the task of generating MIDI Events when any of it's playing surfaces, or Pads, are struck. These MIDI Events will trigger a sound when connected to any MIDI Drum Machine, Synthesizer or Voice Module. The sound created is determined by the MIDI instrument connected, the player's actions and how the Pads are set-up within a Kit.

PAD LAYOUT

The 12 Pads are arranged in a compact but recognisable Drum Kit format. The largest Pad in the centre of the group is the **Snare**. Underneath the Snare is a long thin Pad with a raised edge, this is the **Rim**. Left of the Snare is the **Hi-Hat**. This is actually two Pads in one, the Pad selection being controlled by the position of the Hi-Hat Pedal. Up selects an **Open Hi-Hat** Pad, down selects a **Closed Hi-Hat**. Above and right of the Snare are three **Tom** Pads. The two half-hexagons are **Cymbal** Pads. Along the bottom are 4 small rectangular Pads for miscellaneous **Percussion**.



In addition to these Pads an Input for a Bass Pad, or Electronic Pedal, is provided on the back Panel. In total you have 14 Playing Surfaces in one portable package !

This format is provided for convenience only and should not restrict the way the Pads are played or assigned.

EXTERNAL PADS

The 6 Inputs on the back panel allow you to connect External Pads, or Triggers from Tape, Bugs or Mics. With the exception of the Bass Input, plugging a jack in will disable the equivalent Playing Surface.

PERFORMANCE PAD

The top left-hand Pad, called **CymFx**, is different from the others because it can operate in two ways. It can be used as a normal Pad, just like Cymbal 2, or it can act as an **Effect** Pad allowing performance MIDI Effects to be created in a similar way to using the Pitch or Mod Wheels on a Keyboard.

When an Effect has been programmed, pressing the Pad will generate MIDI data such as Pitch Bend, After Touch or Control Changes. The amount of Effect is proportional to the pressure exerted on the Pad. When the Effect is **Off**, the Pad becomes the playing surface **Cym 1**.

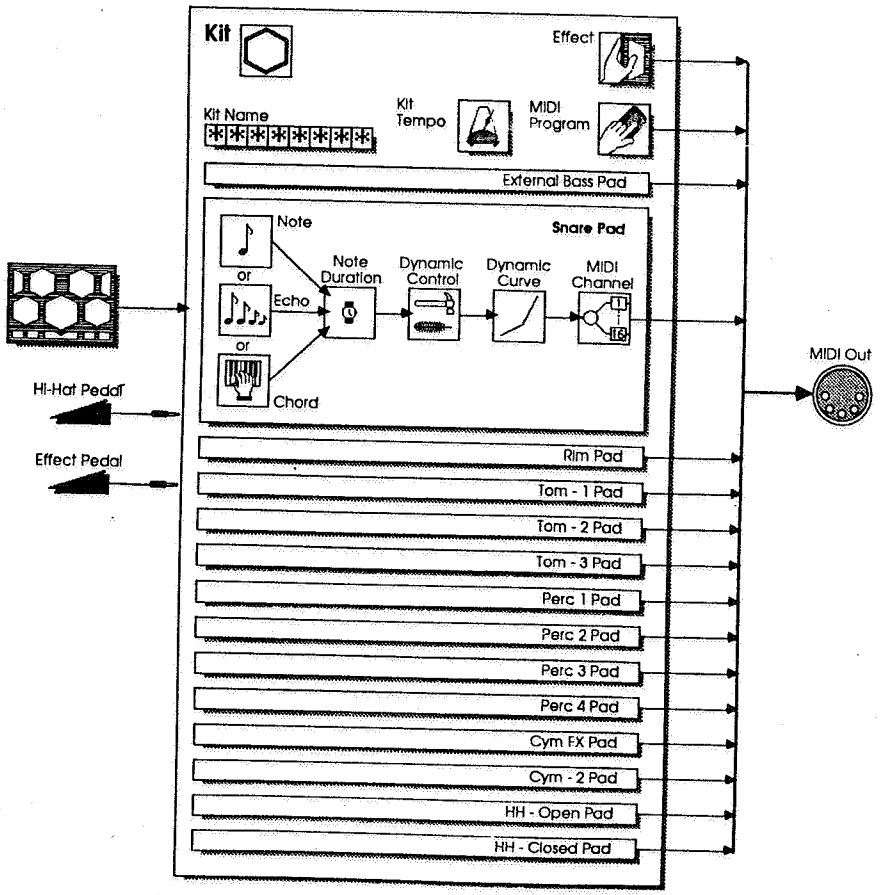
Performance Effects can be also be generated from a Footpedal, connected to the Effect Input on the rear panel, leaving both hands free to play the other Pads.

CREATING KITS

WHAT IS A KIT?

A **Kit** is a collection, or Patch, of all the parameters for each of the 14 Pads along with MIDI Program Changes, an Effect type, Kit Tempo and an 8 character name. There are 50 Kits which can be stored and recalled.

The diagram below shows how these parameters make up a Kit and the Pad parameters which make up the Snare Pad.



SELECTING KITS

PortaKit always powers-up in **Kit Mode.** This is indicated by the upper of the two LED's, situated between the Mode and Edit boxes, glowing green and something like the following display ...

```
KIT:01 DemoKit
FX=Off      ♩:120
```

Kit/Song

If PortaKit is in any other state you can always return to Kit Mode by pressing the Kit/Song button.

Any of the 50 available Kits can now be selected.

To select another Kit, press the Up/Down buttons, or the Up/Down footswitch.

```
KIT:02 NextKit
FX=Off      ♩:120
```

A new Kit is displayed. All of the Pad parameters for this Kit, along with it's Name, Effect and Tempo settings, have been loaded.

You can now play the new Kit.

EDITING A KIT

Pressing any button in the EDIT section invokes the **Kit Edit** Mode. The upper LED will turn from green to red indicating that you are adjusting parameters within the selected Kit.

The EDIT buttons allow each of the following Kit parameters to be altered :

Note Type

Select the Note Type for each Pad - Single Note, Echoed Note or Chord and assign it a MIDI Note from 0 to 127.

Note Duration

Select the Duration, or Gate Time, for each Pad in the Kit.

Dynamic Control

Choose whether each Pad's Note, Echo or Chord is controlled by the Dynamic level of a hit.

Dynamic Curve

Select a Dynamic Curve and Minimum Dynamic for each Pad in the Kit.

MIDI Channel

Select a MIDI Channel for each Pad in the Kit.

MIDI Program

Select a MIDI Program for each of the Kit's MIDI Channels.

Effect

Choose whether the CymFx Pad will be used as an Effects controller in the current Kit and select the MIDI Events which will be produced.

Tempo

Select a Tempo for the Kit.

SELECTING ANOTHER KIT

All the displays within **Kit Edit** Mode allow you to select an alternative Kit so that you can view the same parameter within all the Kits without leaving the Edit Mode.

For example, when Note Type is selected :

```
KIT:01 PAD:Snare
Note:C2  (048)
```

Press Right to Activate the Kit selection.

```
KIT:01 PAD:Snare
Note:C2  (048)
```

Use Up/Down to select another Kit from 1 to 50.

```
KIT:02 PAD:Snare
Note:D3  (062)
```

This allows you to view the **Snare** Note assignments, throughout all the Kits without having to leave Kit Edit Mode.

If you have made any changes before you select another Kit, you will be asked if you wish to Save the changes to the current Kit before the new Kit is loaded.

```
KIT:01 DemoKit
SAVE AS:01 ? Y/N
```

Saves any changes made to this Kit.

SELECTING ANOTHER PAD

Kit Edit displays, which effect the Pads, allow you to view the same parameter for all of the 14 Pads.

For example, when Note Type is selected :

```
KIT:01 PAD:Snare
Note:C2  (048)
```

Press Right to Activate the Kit selection.

```
KIT:01 PAD:Snare
Note:C2  (048)
```

Press Right again to Activate the Pad selection.

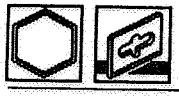
```
KIT:01 PAD:Snare
Note:C2  (048)
```

Up/Down selects the following Pads :

Bass	External Bass Input
Snare	Snare Pad
Rim	Rim Pad
Tom-1	Tom Pad 1
Tom-2	Tom Pad 2
Tom-3	Tom Pad 3
Perc1	Percussion Pad 1 or External Input
Perc2	Percussion Pad 2 or External Input
Perc3	Percussion Pad 3 or External Input
Perc4	Percussion Pad 4 or External Input
CymFX	Cymbal / Effect Pad
Cym-2	Cymbal Pad 2 or External Input
HH-Op	Hi-Hat Pad with Pedal Up
HH-Cd	Hi-Hat Pad with Pedal Down

This allows you to view any Pad assignments, for all of the 14 Pads.

Alternatively you can simply hit the required Pad, to view it's assignment, regardless of the Active region.




KIT EDIT — NOTE TYPE

Note Type

When you press Note Type, the Note assignment of the current Pad in the current Kit is displayed.

```
KIT:01 PAD:Snare
Note:C2   (048)
```

In this case, MIDI Note C2 (Note Number 48), has been assigned to the Snare Pad in Kit 1.

SELECTING THE NOTE TYPE

Each of the 14 Pads can be assigned one of 3 different Note Types.

Normally a **Single MIDI Note** would be produced when you hit a Pad, however, you can change the Note Type to **Echo**, which would make the Note repeat up to 15 times, or **Chord** which would make the Note the Root of a 4 Note Chord.

Press the Left button to Activate the Note Type selection.

```
KIT:01 PAD:Snare
Note:C2   (048)
```

Press Down to select the Note Type, **Echo**.

```
KIT:01 PAD:Snare
Echo:C2   RPT:01
```

Press Down again to select the Note Type, **Chord**.

```
KIT:01 PAD:Snare
Chord:C2  Major
```

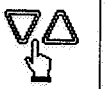
Press the Right button to Activate the Note selection again.

Hitting any of the other Pads will display it's Note Type within the current Kit.

NOTE

When the Note Type **Note** is selected a Single MIDI Note, from C-2 to G8 (0 to 127), will be generated when the Pad is struck. The length, or Gate Time, of this Note is adjusted by **Note Duration**.

```
KIT:01 PAD:Snare
Note:C2   (048)
```



Selects the MIDI Note Value from **C-2** to **G8** (0 to 127).

Chromatic values are shown as the Note, from **A** to **G** with sharps and the Octave from **-2** to **8**. Numeric Values, shown in brackets, represent the equivalent MIDI Note Number. Middle C is therefore C3 or numeric value 60.

ECHO

When the Note Type **Echo** is selected a MIDI Note, from C-2 to G8 (0 to 127), will be repeated from 1 to 15 times when the Pad is struck. The time between Repeats is adjusted by **Note Duration**.

```
KIT:01 PAD:Snare
Echo:C2   RPT:01
```

Activates the Note Value selection.

```
KIT:01 PAD:Snare
Echo:C2   RPT:01
```

Selects the MIDI Note Value from **C-2** to **G8**.

Activates the Repeat selection.

```
KIT:01 PAD:Snare
Echo:C2   RPT:01
```

Selects the number of Repeats from **1** to **15.**

CHORD

When the Note Type **Chord** is selected a 4 note MIDI Chord will be generated when the Pad is struck. The Note Value chosen forms the Root Note of the Chord, while the 3 additional Notes are generated by the selected Chord Type. The length, or Gate Time, of this Chord is adjusted by **Note Duration.**

```
KIT:01 PAD:Snare
Chord:C2  Major
```

Activates the Note Value selection.

```
KIT:01 PAD:Snare
Chord:C2  Major
```

Selects the Root Note from **C-2** to **G8.**

Activates the Chord Type selection.

```
KIT:01 PAD:Snare
Chord:C2  Major
```

Selects one of 4 Chord Types :

Major, Minor, Major 7th or **Minor 7th.**

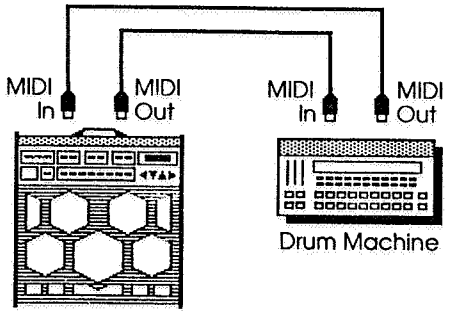
EASY MIDI NOTE ASSIGNMENT

All MIDI Keyboards and most MIDI Drum Machines transmit a MIDI Note Number when a sound is triggered. For PortaKit to play this sound you must assign the same MIDI Note to one of it's Pads.

To save you looking up the MIDI Note Values for each of your MIDI instruments and entering them with the Up/ Down buttons, PortaKit allows you to 'learn' them directly from the instrument itself.

If a MIDI Note is received at MIDI In while the **Note Type** is being edited, the current Pad's MIDI Note and Channel will be changed to match the Note received.

Obviously you must have the MIDI Out and MIDI In of the instrument you wish to learn connected to the PortaKit's MIDI In and MIDI Out, as shown below ...



As an example lets assign the Bass, Snare and Hi-Hat Pads to a MIDI Drum Machine which has the following MIDI Note Numbers :

Bass	48
Snare	49
Hi-Hat Open	50
Hi-Hat Closed	51

Press **Note Type** to enter the Kit Edit mode and assign Note Values.

Hit the External Bass Pad or Pedal on PortaKit.

```
KIT:01 PAD:Bass
Note:C1  (024)
```

Press the button on the Drum Machine which triggers the Bass Drum sound.

```
KIT:01 PAD:Bass
Note:    (048)
```

The Note value has changed to 48, the Note received when the Bass Drum was Triggered on the Drum Machine. Hitting the Bass Pad on the PortaKit will now trigger the Bass Drum.

Hit the Snare Pad on PortaKit.

```
KIT:01 PAD:Snare
Note:    (026)
```

Press the button on the Drum Machine which triggers the Snare Drum sound.

```
KIT:01 PAD:Snare
Note:    (049)
```

The Note value has changed to 49, the Note received when the Snare Drum was Triggered. Hitting the Snare Pad will now trigger the Snare Drum.

Hit the Hi-Hat Pad on PortaKit with the Hi-Hat Pedal up.

```
KIT:01 PAD:HH-Op
Note:    (028)
```

Press the button on the Drum Machine which triggers the Open Hi-Hat sound.

```
KIT:01 PAD:HH-Op
Note:    (050)
```

The Note value has changed to 50, the Note received when the Open Hi-Hat was Triggered. Hitting the Hi-Hat Pad with the Pedal up will now trigger the Open Hi-Hat.

Hit the Hi-Hat Pad on PortaKit with the Hi-Hat Pedal down.

```
KIT:01 PAD:HH-Cd
Note:    (029)
```

Press the button on the Drum Machine which triggers the Closed Hi-Hat sound.

```
KIT:01 PAD:HH-Cd
Note:    (051)
```

The Note value has changed to 51, the Note received when the Closed Hi-Hat was Triggered. Hitting the Hi-Hat Pad with the Pedal down will now trigger the Closed Hi-Hat.

Press **Kit/Song** to leave Kit Edit.

Since you have made some changes you will be asked to save these :

```
KIT:01 DemoKit
SAVE AS:01    Y/N
```

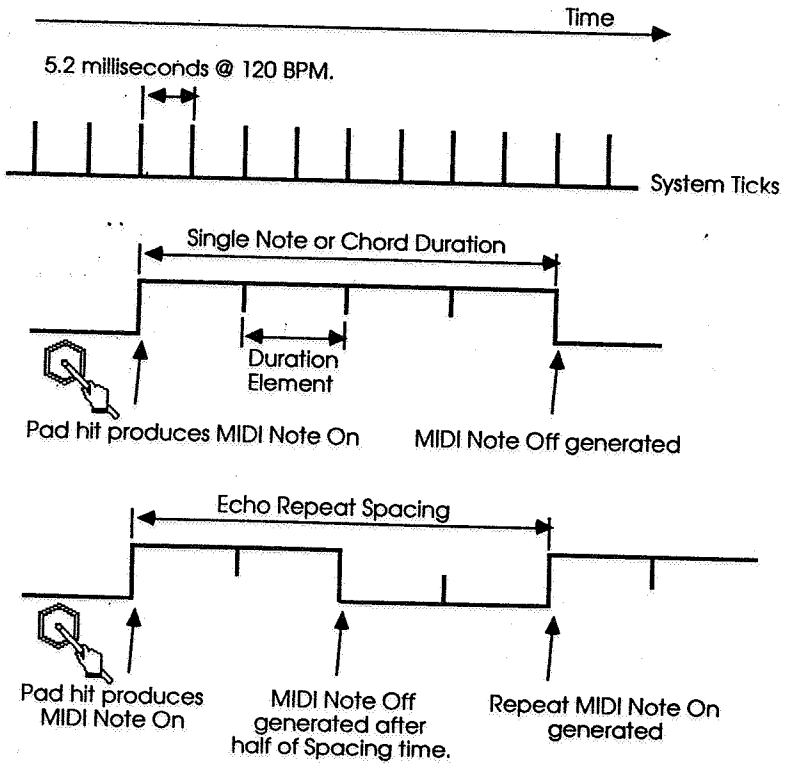
Press **Up** (Yes) to save the new assignments.

KIT EDIT NOTE DURATION

When a Pad is hit a MIDI **Note On** is generated. This will turn on the sound in the receiving MIDI instrument. This sound will only stop, or decay, when the instrument receives the corresponding **Note Off**.

PortaKit allows you to adjust the length of time between the Note On and the Note Off being generated and therefore adjusts the Note Duration.

All Duration values are related to the Tempo of the System Clock, which has a resolution of 96 Ticks per quarter note. Every Duration Element lasts 2 ticks. So, if you select a Duration of 48, the length of the note will be a quarter note.



Since you can alter the Tempo of the System Clock, the time of the Duration Element will change accordingly. At a Tempo of 120 Beats per Minute a System Tick occurs every 5.2 milliseconds, therefore each Duration Element will last for approx 10 milliseconds.

The following table gives the Duration settings required to select normal Note Lengths, however, you can select any value between 0 and 255.

Duration	Note	Name	Musical Name
3	1/64	Sixty-fourth Note	Semi-Demi Quaver
4	1/48		
6	1/32	Thirty-second Note	Demi Quaver
8	1/24		
12	1/16	Sixteenth Note	Semi Quaver
16	1/12		
24	1/8	Eighth Note	Quaver
32	1/6		
48	1/4	Quarter Note	Crotchet
64	1/3		
96	1/2	Half Note	Minim
192	1	Whole Note	Semi Breve

ADJUSTING THE DURATION OF ALL PADS

When the Note Duration button is pressed you can adjust the Note length for **ALL** of the 14 Pads in the current Kit.

```
KIT:01 PAD:All
ALL DUR:[  ]
```

Selects the Duration value for all Pads from **0** to **255**.

If any of the Pads in the current Kit have different Note Durations, asterisks will be displayed in place of the number.

```
KIT:01 PAD:All
ALL DUR:[***]
```

Adjusting the All Duration in this case will force all of the Pads to have the same value, starting at the default value of 12.

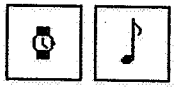
Selects the Duration value for all Pads from **0** to **255**.

Hit any Pad to view it's assigned Duration.

```
KIT:01 PAD:Snare
NOTE DUR:[  ]
```

Selects the Pad's Duration value from **0** to **255**.

Note Duration allows you to adjust the Note length for a Single Note or Chord and the Repeat Spacing for an Echoed Note. The duration display therefore depends on the Note Type selected for each Pad.



SINGLE NOTE DURATION

If the **Note Type** for a selected Pad is **Note** the Single Note Duration is displayed ...

```
KIT:01 PAD:Snare
NOTE DUR:[  ]
```

Selects the Single Note Duration value from **0** to **255**.

ECHO REPEAT SPACING

If the **Note Type** for a selected Pad is **Echo** the Repeat Spacing is displayed ...

```
KIT:01 PAD:Snare
RPT SPACING:[  ]
```

Selects the Repeat Spacing value from **0** to **255**.

CHORD DURATION

If the **Note Type** for a selected Pad is **Chord** the Chord Duration is displayed ...

```
KIT:01 PAD:Snare
CHORD DUR:[  ]
```

Selects the Chord Duration value from **0** to **255**.

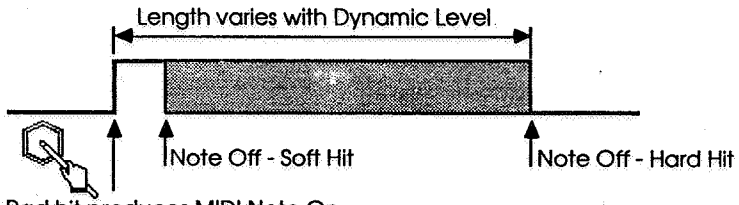
KIT EDIT — DYNAMIC CONTROL

Dynamic Control

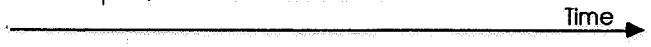
Dynamic Control can be turned On or Off for each of the 14 Pads in a Kit.

When the Pad has a **Single Note** or **Chord** assigned, Dynamic Control allows the Note Length, or Gate Time, to be controlled by how hard the Pad is struck. Light hits will cause short Notes to be produced while heavy hits will produce long Notes.

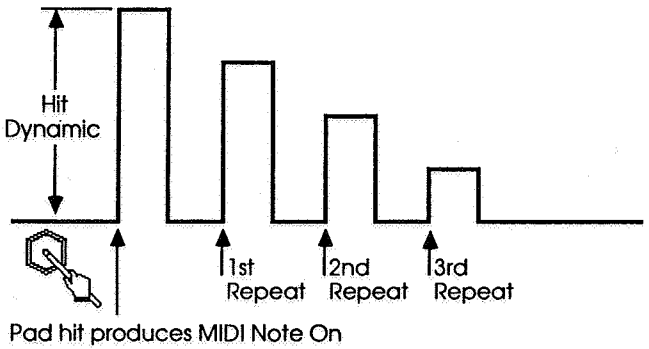
Dynamic Control of Notes & Chords



When the Pad has an **Echoed** Note assigned, Dynamic Control allows the Repeats to Decay Dynamically. The Dynamic of each Repeat will be be related to the Pad hit and the number of repeats chosen. For example, if 3 Repeats were selected ...



Dynamic Control of Echoes



DYNAMIC CONTROL OF NOTES

If the **Note Type** for a selected Pad is **Note** the state of the Dynamic Note Duration is displayed ...

```
KIT:01 PAD:Snare
DYN NOTE DUR:Yes
```

Yes turns the Dynamic Note Duration on, **No** turns it off.

DYNAMIC CONTROL OF ECHOES

If the **Note Type** for a selected Pad is **Echo** the state of the Dynamic Decay is displayed ...

```
KIT:01 PAD:Snare
DYN DECAY:Yes
```

Yes turns the Dynamic Decay on, **No** turns it off.

DYNAMIC CONTROL OF CHORDS

If the **Note Type** for a selected Pad is **Chord** the state of the Dynamic Chord Duration is displayed ...

```
KIT:01 PAD:Snare
DYN CHRD DUR:Yes
```

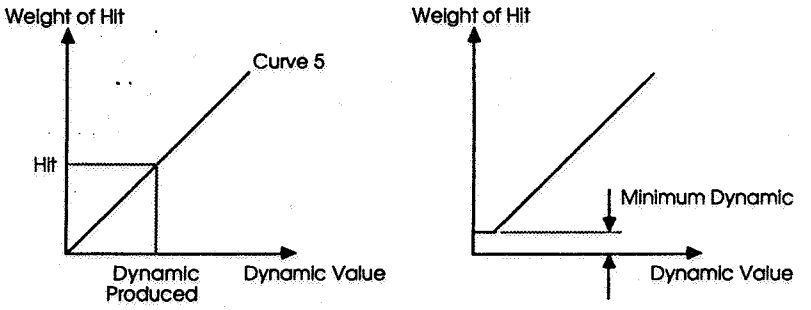
Yes turns the Dynamic Chord Duration on, **No** turns it off.

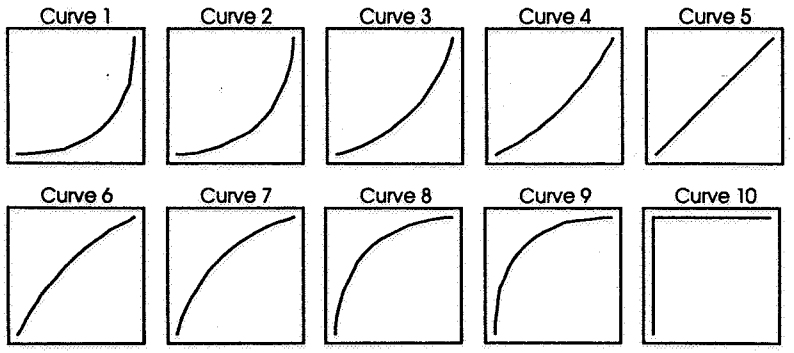
KIT EDIT DYNAMIC CURVE

Dynamic Curves allow you to tailor the Dynamic response, or 'Feel', of the Pads to your own taste. There are 10 different Curve Types available. Each Pad can have a different Curve, if required, allowing the response to be selected for individual sounds.

Curve basically defines how the Weight of a hit corresponds to the Dynamic value produced. Selecting a straight line will define a one to one relationship between Weight and Dynamic Level. By changing the shape of the Curve, you can shape the response of the Pad making the Dynamics more or less 'lively'.

Minimum Dynamic can also be adjusted for each Pad. This defines the Dynamic Level produced by the lightest Pad hit. You may find this useful for MIDI instruments which will not trigger until the Dynamic Level has reached a certain value.





SELECTING CURVES

Dynamic Curve

When the Dynamic Curve button is pressed you can select the Curve Type for **ALL** of the 14 Pads in the current Kit.

```
KIT:01 PAD:All
CURVE:01  MIN:01
```

Selects the Curve Type for all Pads from **1** to **10**.

If any of the Pads in the current Kit have different Curve Types, asterisks will be displayed in place of the number.

```
KIT:01 PAD:All
CURVE:**  MIN:01
```

Selecting the Curve Type in this case will force all of the Pads to have the same Curve.

Hit any Pad to view it's Curve Type.

```
KIT:01 PAD:Snare
CURVE:05  MIN:01
```

Selects the Curve Type for the Pad from **1** to **10**.

SELECTING MIMIMUM DYNAMIC

Dynamic Curve

When the Dynamic Curve button is pressed you can select the Minimum Dynamic for **ALL** of the 14 Pads in the current Kit.

```
KIT:01 PAD:All
CURVE:01  MIN:01
```

Activates the Minimum Dynamic selection.

```
KIT:01 PAD:All
CURVE:01  MIN:01
```

Selects the Minimum Dynamic for all Pads from **1** to **99**.

If any of the Pads in the current Kit have different Minimum Dynamic values, asterisks will be displayed in place of the number.

```
KIT:01 PAD:All
CURVE:01  MIN:**
```

Selecting the Minimum Dynamic in this case will force all of the Pads to have the same value.

Hit any Pad to view it's Curve Type and Minimum Dynamic.

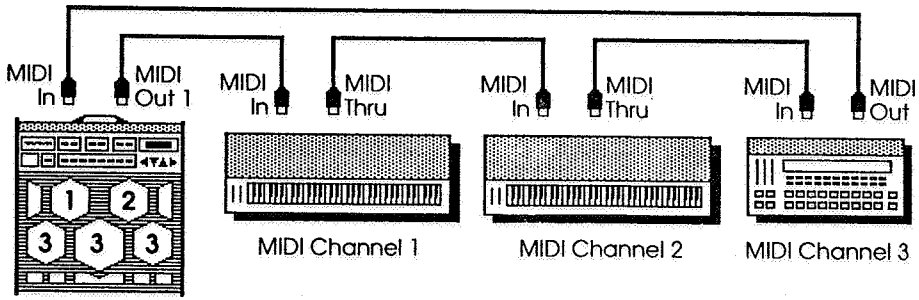
```
KIT:01 PAD:Snare
CURVE:05  MIN:01
```

Selects the Minimum Dynamic for the Pad from **0** to **99**.

KIT EDIT MIDI CHANNEL

Normally, each MIDI instrument you connect to PortaKit will have it's own MIDI Channel. This allows you to send MIDI data to a chain of instruments with each instrument reacting only to the data received on it's particular Channel.

You can have Kits on different MIDI Channels, if you wish to change instruments between Kits. Or, you can select different MIDI Channels for each of the Pads within one Kit, allowing you to play several different instruments from the same Kit as shown below ...



In the example the currentKit has the following MIDI Channel assignments ...

Tom-1	MIDI Channel 1
Tom-2	MIDI Channel 2
Hi-Hat, Snare & Tom-3	MIDI Channel 3

Hitting Tom-1 will trigger a Note on the first Keyboard, Tom-2 will trigger a Note on the second keyboard and any one of Hi-Hat, Snare or Tom-3 will trigger Notes on the Drum Machine.

To play the Drum Machine on its own you could select another Kit which had **All** of the Pads on MIDI Channel 3.

MIDI Channel

When the MIDI Channel button is pressed you can select the MIDI Channel for **ALL** of the 14 Pads in the current Kit.

```
KIT:01 PAD:All
MIDI CHANNEL :01
```

Selects the MIDI Channel for all Pads from **1** to **16**.

If any of the Pads in the current Kit have different MIDI Channels, asterisks will be displayed in place of the number.

```
KIT:01 PAD:All
MIDI CHANNEL :**
```

Selecting a MIDI Channel in this case will force all of the Pads to have the same Channel.

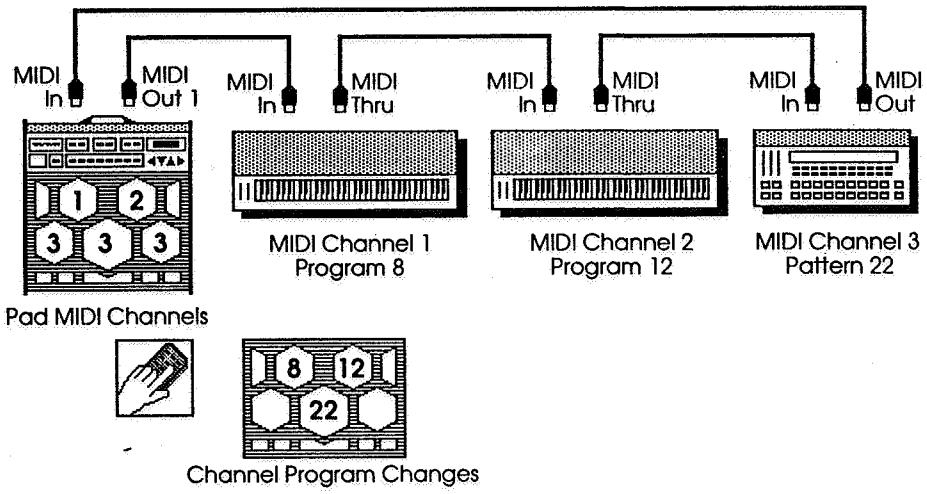
Hit any Pad to view it's MIDI Channel.

```
KIT:01 PAD:Snare
MIDI CHANNEL :01
```

Selects the MIDI Channel for the Pad from **1** to **16**.

MIDI Program Changes allow you to remotely select the Program, or Patch, on any MIDI Instruments connected. Some Drum Machines also recognise MIDI Program Changes, using them to change Pattern.

Within a Kit you can select a MIDI Program Change for each of the Kit's MIDI Channels. When the Kit is selected all the MIDI Program Changes assigned to that Kit will be sent, selecting all the sounds required, without touching any of your MIDI Equipment.



MIDI Program

When the MIDI Program button is pressed you can select a MIDI Program Change for each of the MIDI Channels in the current Kit.

```
KIT:01 CHANNL:01
MIDI PROGRAM:Off
```

Selects the MIDI Program Change **Off** or **1** to **128** for the displayed MIDI Channel.

If you don't want to send any Program Changes when the Kit is selected, set the Program Change value to **Off**.

```
KIT:01 CHANNL:01
MIDI PROGRAM:Off
```

A Program Change can be selected for each of the MIDI Channels assigned in the Kit.

Activates the MIDI Channel selection.

```
KIT:01 CHANNL:01
MIDI PROGRAM:001
```

Selects all the MIDI Channels available in the current Kit.

```
KIT:01 CHANNL:02
MIDI PROGRAM:024
```

Activates the MIDI Program selection again.

```
KIT:01 CHANNL:02
MIDI PROGRAM:024
```

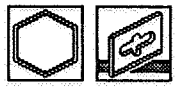
Selects the MIDI Program Change **Off** or **1** to **128** for the displayed MIDI Channel.

Alternatively, you can view the MIDI Channels assigned by striking the Pads. The MIDI Channel assigned to each Pad will be displayed, but the Program selected will remain Active.

Hit any Pad to view it's MIDI Channel and Program Change.

```
KIT:01 CHANNL:01
MIDI PROGRAM:001
```

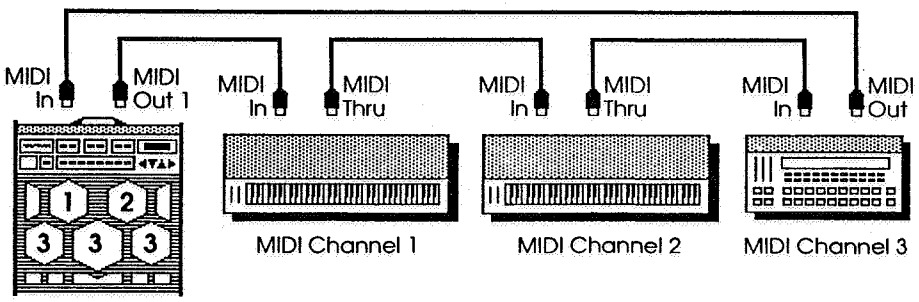
Selects the MIDI Program Change **Off** or **1** to **128** for this Pad's MIDI Channel.



KIT EDIT MIDI CHANNEL

Normally, each MIDI instrument you connect to PortaKit will have it's own MIDI Channel. This allows you to send MIDI data to a chain of instruments with each instrument reacting only to the data received on it's particular Channel.

You can have Kits on different MIDI Channels, if you wish to change instruments between Kits. Or, you can select different MIDI Channels for each of the Pads within one Kit, allowing you to play several different instruments from the same Kit as shown below ...



In the example the currentKit has the following MIDI Channel assignments ...

Tom-1	MIDI Channel 1
Tom-2	MIDI Channel 2
Hi-Hat, Snare & Tom-3	MIDI Channel 3

Hitting Tom-1 will trigger a Note on the first Keyboard, Tom-2 will trigger a Note on the second keyboard and any one of Hi-Hat, Snare or Tom-3 will trigger Notes on the Drum Machine.

To play the Drum Machine on its own you could select another Kit which had **All** of the Pads on MIDI Channel 3.

MIDI Channel

When the MIDI Channel button is pressed you can select the MIDI Channel for **ALL** of the 14 Pads in the current Kit.

```
KIT:01 PAD:All
MIDI CHANNEL :01
```

Selects the MIDI Channel for all Pads from **1** to **16**.

If any of the Pads in the current Kit have different MIDI Channels, asterisks will be displayed in place of the number.

```
KIT:01 PAD:All
MIDI CHANNEL :**
```

Selecting a MIDI Channel in this case will force all of the Pads to have the same Channel.

Hit any Pad to view it's MIDI Channel.

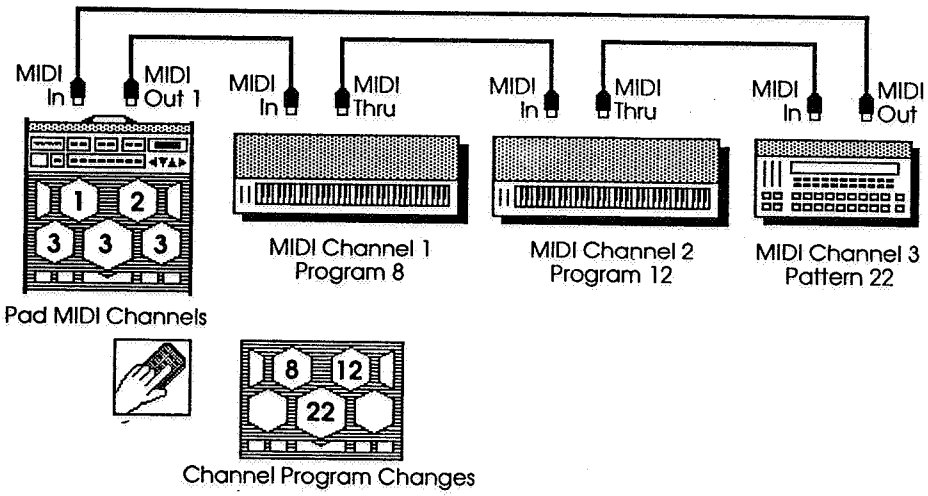
```
KIT:01 PAD:Snare
MIDI CHANNEL :01
```

Selects the MIDI Channel for the Pad from **1** to **16**.

KIT EDIT — MIDI PROGRAM

MIDI Program Changes allow you to remotely select the Program, or Patch, on any MIDI Instruments connected. Some Drum Machines also recognise MIDI Program Changes, using them to change Pattern.

Within a Kit you can select a MIDI Program Change for each of the Kit's MIDI Channels. When the Kit is selected all the MIDI Program Changes assigned to that Kit will be sent, selecting all the sounds required, without touching any of your MIDI Equipment.



MIDI Program

When the MIDI Program button is pressed you can select a MIDI Program Change for each of the MIDI Channels in the current Kit.

```
KIT:01 CHANNL:01
MIDI PROGRAM:Off
```

Selects the MIDI Program Change **Off** or **1** to **128** for the displayed MIDI Channel.

If you don't want to send any Program Changes when the Kit is selected, set the Program Change value to **Off**.

```
KIT:01 CHANNL:01
MIDI PROGRAM:Off
```

A Program Change can be selected for each of the MIDI Channels assigned in the Kit.

Activates the MIDI Channel selection.

```
KIT:01 CHANNL:01
MIDI PROGRAM:001
```

Selects all the MIDI Channels available in the current Kit.

```
KIT:01 CHANNL:02
MIDI PROGRAM:024
```

Activates the MIDI Program selection again.

```
KIT:01 CHANNL:02
MIDI PROGRAM:024
```

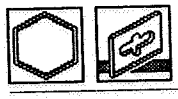
Selects the MIDI Program Change **Off** or **1** to **128** for the displayed MIDI Channel.

Alternatively, you can view the MIDI Channels assigned by striking the Pads. The MIDI Channel assigned to each Pad will be displayed, but the Program selected will remain Active.

Hit any Pad to view it's MIDI Channel and Program Change.

```
KIT:01 CHANNL:01
MIDI PROGRAM:001
```

Selects the MIDI Program Change **Off** or **1** to **128** for this Pad's MIDI Channel.



KIT EDIT EFFECT

The **CymFX** Pad is different from all the other Pads in that it can be used as a Performance Controller as well as a playing surface. When acting as a controller, MIDI Effects like Pitch Bend and After Touch can be generated simply by pressing the Pad. The pressure exerted on the Pad controls the amount of Effect produced.

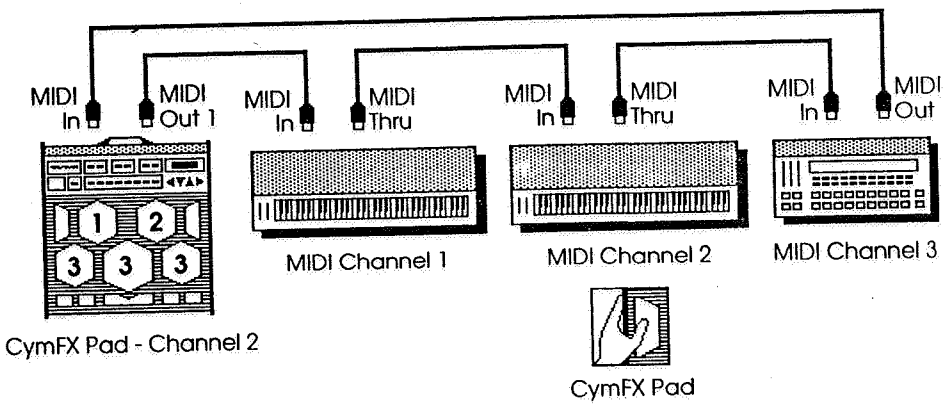
The current Effect assignment is always displayed when the unit is in Kit Mode ...

```
KIT:02 RocKit
FX=PB Down ♩:120
```

In this case MIDI Pitch Bend Down has been assigned to the Pad. This will cause the Pitch of any MIDI Instruments connected to Bend Downwards when the Pad is pressed.

The function of the Pad can be defined for each Kit allowing some Kits to use it as a second Cymbal while others have different MIDI Effects assigned.

If the Pads within a Kit are on several different MIDI Channels you must select which one of the Kit's MIDI Channels the MIDI Effect will be sent down.



In the above example the Effect Pad has been assigned to Channel 2 and therefore only controls the second Keyboard.

Effect

When the Effect button is pressed you can select the function of the **CymFX** Pad in the current Kit.

```
KIT:01
EFFECT: Off
```

When the Effect is **Off**, the Pad will function as a normal playing surface and all the Pad parameters can be assigned to CymFX as they would be with any other Pad.

ASSIGNING A MIDI EFFECT

All of the Pad Effects, except Gate Damp, are MIDI Effects. When a MIDI Effect is displayed, the MIDI Channel it will be sent on is also shown. You can select the Channel from any of those in the current Kit.

When the Effect Region is Active you can select a MIDI Effect by pressing the Down button.

Selects the Pad Effect : **PB Up**

```
KIT:01 CHANNL:01
EFFECT: PB UP
```

Selecting **PB Up** allows you to use the Pad to generate MIDI Pitch Bend Upwards, the amount being proportional to the pressure exerted on the Pad. Note that the **Range** of this Pitch Bend is determined by the setting on your MIDI instrument. Therefore, if you want the Pitch to Bend Up an Octave at maximum pressure you must select a 12 Semitone Range on the receiving instrument.

Selects the Pad Effect : **PB Down**

```
KIT:01 CHANNL:01
EFFECT: PB DOWN
```

Selecting **PB Down** allows you to use the Pad to generate MIDI Pitch Bend Downwards, the amount being proportional to the pressure exerted on the Pad. Note that the **Range** of this Pitch Bend is determined by the setting on your MIDI instrument.

Selects the Pad Effect : **A Touch**

```
KIT:01 CHANNL:01
EFFECT: A TOUCH
```

Selecting **A Touch** allows you to use the Pad to generate MIDI After Touch, the amount being proportional to the pressure exerted on the Pad. Note that the **Range** of this After Touch is determined by the setting on your MIDI instrument.

Selects the Pad Effect : **Cntl**

```
KIT:01 CHANNL:01
EFFECT: Cntl:01
```

Selecting **Cntl** allows you to use the Pad to generate any one of 95 MIDI Controllers, the amount being proportional to the pressure exerted on the Pad. Note that the **Range** of these Controllers will be determined by the setting on your MIDI instrument.

Activates the MIDI Controller Number selection.

```
KIT:01 CHANNL:01
EFFECT: Cntl:01
```

Selects the MIDI Controller Number from **0** to **95**.

Some of the more useful Controller numbers are ...

1	Modulation Wheel
2	Breath Controller
4	Foot Controller
5	Portamento Time
6	Data Entry MSB
7	Main Volume
8	Balance
10	Pan

Remember that these Controllers will only work if your MIDI instruments support them. Recognised Controllers should be listed in the machine's MIDI Implementation Chart which is normally printed at the back of it's User Manual.

SELECTING THE EFFECT MIDI CHANNEL

Once you have selected the MIDI Effect you require, you should select the MIDI Channel you want to send it on.

Activates the MIDI Channel selection.

```
KIT:01 CHANNL:01
EFFECT: Cntl:01
```

Selects one of the MIDI Channels in the current Kit.

Alternatively, you can view the MIDI Channels assigned by striking the Pads. The MIDI Channel for each Pad will be displayed, but the Effect selected will remain Active.

Hit any Pad to view it's MIDI Channel.

```
KIT:01 CHANNL:01
EFFECT: Cntl:01
```

Selects the MIDI Effect to go down this Pad's MIDI Channel.

USING CYMFX TO DAMP ALL THE DURATIONS

Selects the Pad Effect : **Gt Damp**

```
KIT:01
EFFECT: Gt. Damp
```

Gate Damp is not a MIDI Effect but allows you to use the Pad as a Damper to stop any Notes currently sounding. This is particularly useful when you are playing Notes with long Durations, either to manually control the Duration or to stop all of the Notes from sounding. Since this is global to the PortaKit no MIDI Channel is displayed.

KIT EDIT TEMPO

Tempo

Tempo allows you to store a Metronome Tempo with each Kit. When the Kit is selected the Metronome will be updated with the stored value. When the Metronome is generating MIDI Clocks, this function allows you to remotely control your Drum Machine or Sequencer Tempo simply by selecting a new Kit.

When you first select Tempo the current system Tempo is displayed. You can select another Tempo for this Kit, which will be loaded when the Kit is selected.

```
KIT:01  TEMPO
BPM:120 LOAD:Yes
```

Selects the new Kit Tempo value :

40 to **240** Beats per Minute.

If you don't want the Metronome Tempo to be updated when the Kit is selected and therefore remain at the last chosen value, you can disable the load.

Selects the Load status:

```
KIT:01  TEMPO
BPM:120 LOAD:No
```

Yes Enables or **No** Disables the Load.

LEAVING KIT EDIT MODE

Kit/Song

To leave the Kit Edit Mode press the Kit/Song button. If you have made any changes to the current Kit the following message will be displayed ...

```
KIT:01 DemoKit
SAVE AS:01 ? Y/N
```

You now have 4 options :

SAVE EDITS

Pressing the Up (Yes) button, saves any Edits made to the Kit and returns to Kit Mode.

LOSE EDITS

Pressing the Down (No) button, loses any Edits made to the Kit and returns to Kit Mode.

SAVE AS ANOTHER KIT (COPY EDIT)

If you wish to Save your edited Kit as another Kit, leaving the original intact, you can Copy it onto another Kit. Remember that the previous settings of Kit you are Saving to will be lost, since it is replaced by the Edited Kit.

Activates the Kit number selection.

```
KIT:01 DemoKit
SAVE AS:01 ?
```

Selects the Kit number you wish to Save to from **1** to **50**.

```
KIT:01 DemoKit
SAVE AS:02 ?
```


Arms the Save As function again.

```
KIT:01 DemoKit
SAVE AS:02 ? Y/N
```

Saves the Edited Kit on top of the selected Kit.

CANCEL THE SAVE OPERATION

Pressing any of the EDIT buttons while the Question mark is flashing will cancel the Save As operation and return to the Kit Edit Mode. Any previous Edits will be retained.

All other buttons are ignored.

NAMING A KIT

Once you have created a Kit you can give it an 8 Character Name which is displayed next to it's number in the Kit Mode. This Naming Function is invoked from the Special Menu.

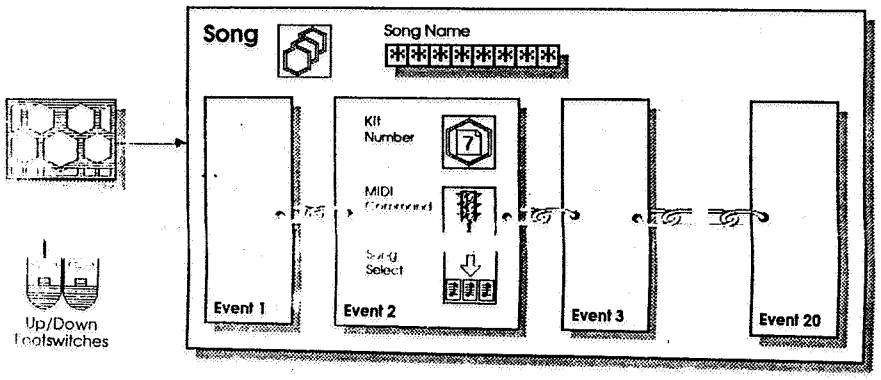
CREATING SONGS

WHAT IS A SONG?

A Song is a chain of Events which can be recalled in a pre-programmed Sequence using the Up/Down buttons or an external Up/Down Footswitch.

PortaKit has 20 such Songs, each of which can have up to 20 Events programmed.

Events would normally consist of your Kit setups, but you can also combine these with MIDI Commands and MIDI Song Selects to Start, select Songs and Stop an External MIDI Drum Machine or Sequencer. In this way PortaKit Songs allow you to have total remote control over your MIDI equipment during a performance.



WHAT IS AN EVENT ?

An Event is one Step within a Song and can contain any combination of the following :

A Kit Number from 1 to 50.
A MIDI Command such as Start, Stop or Continue.
A MIDI Song Select Number from 1 to 128.

Any combination of KIT Number, MIDI Command, and SONG Select can be stored as an Event. When the required number of Events has been programmed END SONG can be used to make the Song less than 20 Events.

SELECTING SONGS

Pressing the **Kit/Song** button alternates between Kit and Song Modes. One of the two LED's between the MODE and EDIT boxes will indicate which Mode is currently active.

Kit/Song

Press the **Kit/Song** button until the lower SONG LED is active. The display shows the number and name of the current Song ...

SONG: 01 DemoSong
READY

Any of the 20 available Songs can now be selected.

To select another Song, press the Up/Down buttons, or the Up/Down footswitch.

SONG: 02 ********
EMPTY

If the selected Song contains no Events, the bottom line of the display reads EMPTY. There are no other Active Regions on this display so Left and Right buttons have no effect.

To select another Song, press the Up/Down buttons, or the Up/Down footswitch.

SONG: 01 DemoSong
READY

If the selected Song contains a number of Events, the bottom line of the display reads READY.

Press Right to Activate the selected Song.

SONG: 01 DemoSong
READY

Once READY is flashing you can Activate the first Event in the Song by pressing the Up button or Footswitch.

```
SONG:01 DemoSong
01:K01 M S ♩:120
```

The Event number is now flashing indicating that you can step forwards or backwards through the Events in the Song using the Up/Down buttons or Footswitches.

Event Status

Next to the flashing Event number is the **Event Status**. This shows you which Kit has been selected and whether a MIDI Command or MIDI Song Select has been sent.

```
01:K01 M S
```

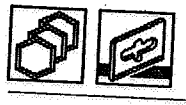
Kit Number
The Kit Number is shown as **K (1 to 50)**. If there is no Kit programmed for the event, three dashes (---) will be displayed in the Kit position.

MIDI Command
If a MIDI Command has been programmed for the event, it will be indicated by an **M**. Otherwise a dash (-) will be displayed in it's position.

MIDI Song Select
If a MIDI Song Select has been programmed for the event, it will be indicated by an **S**. Otherwise a dash (-) will be displayed in it's position.

Metronome Tempo

Following the Event Status is the current Metronome Tempo. If any of the Kits in the Song have a Kit Tempo programmed, the new Tempo will be displayed when the Kit is loaded.



EDITING A SONG

Pressing any of the first 3 buttons in the EDIT section invokes the **Song Edit** Mode. The lower LED will turn from green to red indicating that you are adjusting Events within the current Song.

The EDIT buttons allow the following parameters to be altered for each of the Song's Events :

Kit Number

Select a Kit Number, from 1 to 50.

MIDI Command

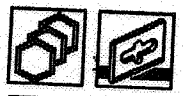
Select a MIDI Command : Start, Stop or Continue.

Song Select

Select a MIDI Song Select, from 1 to 128.

End Song

Shorten the Song to make it less than 20 Events long.



SONG EDIT KIT NUMBER

Kit Number

Pressing Kit Number allows any one of PortaKit's 50 Kits to be assigned to an Event. When the Event is selected the Pad parameters, Program Change, Effect and Tempo of the corresponding Kit will be loaded.

```
SONG:01 EVENT:01
KIT:--
```

When the two dashes are displayed, it means that no Kit will be selected when this Event is Activated. This allows you to program Events which contain only MIDI Commands or Song Selects.

Selects the Kit number, -- or 1 to **50**, for the firstEvent.

```
SONG:01 EVENT:01
KIT:01 Demokit
```

Kits will be loaded as you select them so that you can preview the way that your Song is building up.

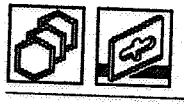
Activates the next Event.

```
SONG:01 EVENT:02
KIT:--
```

Selects the Kit number, -- or 1 to **50**, for the next Event.

You can step back through the Events to preview the Song so far or to change any previous selections.

Activates the last Event.



SONG EDIT MIDI COMMAND

MIDI Command

Pressing MIDI Command allows a MIDI Real-Time Command to be assigned to an Event. The Commands available are Start, Stop and Continue. These can be used to remotely Start and Stop MIDI Drum Machines and Sequencers.

```
SONG:01 EVENT:01
MIDI CMD: Off
```

When **Off** is displayed, no MIDI Command will be sent when the Event is Activated. This allows you to program Events which contain only Kit Numbers or Song Selects.

Selects the MIDI Command :

Off	Don't send any MIDI Command
Start	Send a Start Command
Stop	Send a Stop Command
Cont	Send a Continue Command

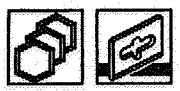
MIDI Commands are not sent as you select them. They will only be sent when the Event is Activated in Song Mode.

Activates the next Event.

```
SONG:01 EVENT:02
MIDI CMD: Off
```

You can step back through the Events to preview the Song so far, or to change any previous selections.

Activates the last Event.




SONG EDIT SONG SELECT

Song Select

Pressing Song Select allows a MIDI Song Select Number to be assigned to an Event. These allow Songs to be selected on a MIDI Drum Machine or Sequencer in the same way as Program Changes select Programs on a Keyboard or Voice Module.

```
SONG:01 EVENT:01
SONG SELECT:Off
```

When **Off** is displayed, no Song Select will be sent when the Event is Activated. This allows you to program Events which contain only Kit Numbers or MIDI Commands.

Selects the MIDI Song Select **Off** or **1** to **128**.

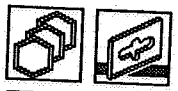
Song Selects will be sent as you select them so that you can preview the way that your Song is building up.

Activates the next Event.

```
SONG:01 EVENT:02
SONG SELECT:Off
```

You can step back through the Events to preview the Song so far, or to change any previous selections.

Activates the last Event.



SONG EDIT - END SONG

End Song

A Song can be made less than 20 Events by pressing END SONG once the required number of Events has been programmed.

For example, if you had just programmed Event 4 with Kit 24 and wanted to limit the Song to 4 Events ...

```
SONG:01 EVENT:04
KIT:24 RocKit
```

Press **End Song** to leave the Song Edit Mode and shorten the Song length.

```
SONG:01 DemoSong
SAVE AS:01 Y/N
```

Press Up (Yes) to Save any changes made to the Song.

```
SONG:01 DemoSong
READY
```

The Song is now 4 Events long and cannot be stepped beyond the 4th Event.

To change the Length of the Song again enter the Song Edit Mode and press End Song on the new Event.

LEAVING SONG EDIT MODE

Kit/Song

To leave the Song Edit Mode press the **Kit/Song** button. If you have made any changes to the current Song the following message will be displayed ...

```
SONG:01 DemoSong
SAVE AS:01 ? Y/N
```

You now have 4 options :

SAVE EDITS

Pressing the Up (Yes) button, saves any Edits made to the Song and returns to Song Mode.

LOSE EDITS

Pressing the Down (No) button, loses any Edits made to the Song and returns to Song Mode.

SAVE AS ANOTHER SONG (COPY EDIT)

If you wish to Save your edited Song as another Song, leaving the original intact, you can Copy it onto another Song. Remember that the previous settings of Song you are Saving to will be lost, since it will be replaced by the Edited Song.

Activates the Song number selection.

```
SONG:01 DemoSong
SAVE AS:01 ?
```

Selects the Song number you wish to Save to from **1** to **20**.

```
SONG:01 DemoSong
SAVE AS:02 ?
```


Arms the Save As function again.

```
SONG:01 DemoSong
SAVE AS:02 ? Y/N
```

Saves the Edited Song on top of the selected Song.

CANCEL THE SAVE OPERATION

Press any of the EDIT buttons while the Question mark is flashing will cancel the Save As operation and return to the Song Edit Mode. Any previous Edits will be retained.

All other buttons are ignored.

NAMING A SONG

Once you have created a Song you can give it an 8 Character Name which is displayed next to it's number in the Song Mode. This Naming Function is invoked from the Special Menu.

USING THE METRONOME

The METRONOME section generates a pulse, from 40 to 240 Beats per Minute, which acts as the master timing reference for the whole instrument. This timing pulse can be routed to an internal buzzer, causing an audible Tick, and / or can be sent as a MIDI Clock to synchronize external Drum Machines and Sequencers.

A Metronome Output is also provided on the rear panel to allow the audio Tick to be amplified through an external mixer.

Alternatively you can disable the internal source and Synchronize the PortaKit to another Drum Machine or Sequencer from incoming MIDI Clocks.

All the Note Durations are locked to the current Tempo. Therefore if you double the Tempo you halve the Durations of all the Notes and Echo times, conversely if you halve the Tempo, you double the Durations.

START/STOP

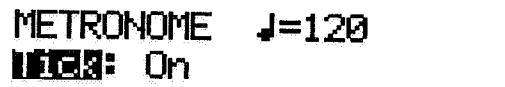
The internal Metronome Tick can be started or stopped using the **Start/Stop** button. When a Sync setting of **Int+MidiOut** is selected, MIDI Start, Clock and Stop events will be transmitted when the Metronome is started, running or stopped.

An external footswitch can be connected to the Start/Stop input on the rear panel. This duplicates the function of the button, allowing you to remotely Start and Stop the PortaKit's Metronome.

METRONOME MENU

The Metronome Menu allows access to all of the timing functions related to the Metronome and Sequencer.

When the Menu button is pressed the Metronome Menu will be displayed with the first choice flashing. The current Tempo is displayed for reference, but cannot be adjusted.



Using the Up or Down buttons you can step up or down through the Menu choices ...

Tick	Turn the Metronome Tick On or Off.
TSig	Select the Metronome Time Signature.
Quantise	Select the Sequencer's Quantise Interval.
Record	Select the Sequencer Record Mode.
Sync	Select the Metronome Sync Source.
Memory Left	Check the amount of Sequencer Memory Remaining.

Once you have selected your Menu choice, press the Right button to make it's parameter Active.

Use the Up and Down buttons to select the required setting.

You can make the Menu choice active again by pressing the Left button, and then Up or Down to another choice in the menu.

To leave the Metronome Menu, select any other button in the Sequencer, Special or Mode sections.

Any changes made to the Metronome parameters will be retained.

METRONOME MENU - TICK

Tick allows the state of the audio Tick, produced by the internal Buzzer and from the Metronome Output, to be selected.

If **From MIDI** is selected as the Sync source, Tick will be forced Off, until you select **Internal** again.

```
METRONOME  ♩=120
Tick: On
```

Activates the Metronome Tick selection

```
METRONOME  ♩=120
Tick: Off
```

Selects the Metronome Tick setting :

Off No Metronome Tick.
On Metronome Tick available in any mode.
Record Metronome Tick only whenRecording.

Activates the Menu choice 'Tick' again.

Arms the Save As function again.

```
SONG:01 DemoSong
SAVE AS:02 ▮ Y/N
```

Saves the Edited Song on top of the selected Song.

CANCEL THE SAVE OPERATION

Press any of the EDIT buttons while the Question mark is flashing will cancel the Save As operation and return to the Song Edit Mode. Any previous Edits will be retained.

All other buttons are ignored.

NAMING A SONG

Once you have created a Song you can give it an 8 Character Name which is displayed next to it's number in the Song Mode. This Naming Function is invoked from the Special Menu.

USING THE METRONOME

The METRONOME section generates a pulse, from 40 to 240 Beats per Minute, which acts as the master timing reference for the whole instrument. This timing pulse can be routed to an internal buzzer, causing an audible Tick, and / or can be sent as a MIDI Clock to synchronize external Drum Machines and Sequencers.

A Metronome Output is also provided on the rear panel to allow the audio Tick to be amplified through an external mixer.

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All the Note Durations are locked to the current Tempo. Therefore if you double the Tempo you halve the Durations of all the Notes and Echo times, conversely if you halve the Tempo, you double the Durations.

START/STOP

The internal Metronome Tick can be started or stopped using the **Start/Stop** button. When a Sync setting of **Int+MidiOut** is selected, MIDI Start, Clock and Stop events will be transmitted when the Metronome is started, running or stopped.

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The Metronome Menu allows access to all of the timing functions related to the Metronome and Sequencer.

When the Menu button is pressed the Metronome Menu will be displayed with the first choice flashing. The current Tempo is displayed for reference, but cannot be adjusted.

Using the Up or Down buttons you can step up or down through the Menu choices ...

Tick	Turn the Metronome Tick On or Off.
TSig	Select the Metronome Time Signature.
Quantise	Select the Sequencer's Quantise Interval.
Record	Select the Sequencer Record Mode.
Sync	Select the Metronome Sync Source.
Memory Left	Check the amount of Sequencer Memory Remaining.

Once you have selected your Menu choice, press the Right button to make it's parameter Active.

Use the Up and Down buttons to select the required setting.

You can make the Menu choice active again by pressing the Left button, and then Up or Down to another choice in the menu.

To leave the Metronome Menu, select any other button in the Sequencer, Special or Mode sections.

Any changes made to the Metronome parameters will be retained.

METRONOME MENU - TICK

Tick allows the state of the audio Tick, produced by the internal Buzzer and from the Metronome Output, to be selected.

If **From MIDI** is selected as the Sync source, Tick will be forced Off, until you select **Internal** again.

```
METRONOME  ♩=120
Tick: On
```

Activates the Metronome Tick selection

```
METRONOME  ♩=120
Tick: On
```

Selects the Metronome Tick setting :

Off	No Metronome Tick.
On	Metronome Tick available in any mode.
Record	Metronome Tick only whenRecording.

Activates the Menu choice 'Tick' again.

METRONOME MENU - TIME SIGNATURE

The Metronome **Time Signature**, or Meter, can be selected using this Menu choice which allows the Beat Length and Number of Beats in the Bar to be specified.

Metronome **Resolution** can also be adjusted so that Ticks occur on the beat or half-beat. Downbeats are accented with a Beep to distinguish them from the normal Metronome Tick.

```
METRONOME  ♩=120
TSig:04/04 RES:L
```

Activates the Number of Beats in the Bar.

```
METRONOME  ♩=120
TSig:04/04 RES:L
```

Selects the Number of Beats from **1** to **12**.

Activates the Beat Length.

```
METRONOME  ♩=120
TSig:04/04 RES:L
```

Selects the Beat Length as **2**, **4** or **8**.

Activates the Metronome Resolution.

```
METRONOME  ♩=120
TSig:04/04 RES:L
```

Down selects Low Resolution (L), Up selects High (H).

Activates the Menu choice 'TSig' again. Alternatively, you can use the Left button to move through the above choices in reverse order.

METRONOME MENU — QUANTISE

Quantise is a function which you can use with the Sequencer, to automatically 'tighten-up' your playing. When a performance is recorded, any hits which fall between the selected time intervals will be forced to nearest interval. If a 1/16 is chosen, hits will be recorded to the nearest sixteenth note, or Semi-quaver.

When Quantise is Off the resolution is 96 Beats per Quarter Note.

Note that unless Quantise is **Off**, any MIDI Effects generated by the CymFx Pad will also be Quantised when Recording.

```
METRONOME  ♩=120
Quantise:  1/16
```

Activates the Quantise Value.

```
METRONOME  ♩=120
Quantise:  1/16
```

Selects the Quantise Value ...

1/4, 1/6, 1/8, 1/12, 1/16, 1/24, 1/32 or **Off.**

Activates the Menu choice 'Quantise' again.

METRONOME MENU — RECORD MODE

Record Mode allows you to select how the Sequencer will Record once you have press the Start/Stop button or Footswitch.

When **From Hit** is selected, the Metronome will start but the Sequencer will remain at Bar -1 waiting for a Pad hit. When a Pad is hit the Metronome will reset and the Sequencer starts to record.

Selecting **Count In** produces a 2 Bar Count in before the Sequencer starts recording.

```
METRONOME  ♩=120
Record:From Hit
```

Activates the Record Mode selection.

```
METRONOME  ♩=120
Record:From Hit
```

Selects the Sequencer Record Mode ...

From Hit Wait for a Pad hit before recording.
Count In Count In 2 Bars before recording.

Activates the Menu choice 'Record' again.


METRONOME MENU  SYNC

Sync determines how the PortaKit is Synchronized with the outside world.

Internal
When **Internal** is selected the Sequencer and Note Durations will be locked to the Tempo generated by the Internal Metronome.

Int+MidiOut
Selecting **Int+MidiOut** has the same effect as Internal but enables MIDI Start, Clock and Stop events to be generated when the Metronome is Started, running or Stopped. This allows you to remotely control a MIDI Drum Machine or Sequencer from the PortaKit's Start/Stop button or footswitch.

From Midi
To synchronize PortaKit from an external source select **From Midi**. PortaKit will now react to incoming MIDI Start, Clock and Stop events. The Tempo of the incoming MIDI Clock is displayed in place of the internal Metronome Tempo. To remind you that sync is required from an external source, the Tempo icon changes from a 'quarter note' to an 'M' for MIDI.

```
METRONOME  ♩=120
Sync: Internal
```

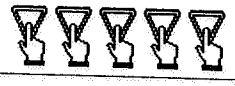
Activates the Sync selection.

```
METRONOME  ♩=120
Sync: Internal
```

Selects the Sync Mode :

Internal	Use Internal Metronome.
Int+MidiOut	Use Internal Metronome and generate MIDI Clock.
From Midi	Sync from External MIDI Clock.

Activates the Menu choice 'Sync' again.


METRONOME MENU  MEMORY LEFT

Selecting **Memory Left** allows you to view the amount of Sequencer Memory remaining. The amount is expressed as a percentage of the total space available, which is around 10,000 events. An error message will be displayed if you run out of Memory during a recording.

```
METRONOME  ♩=120
Memory Left: 99%
```

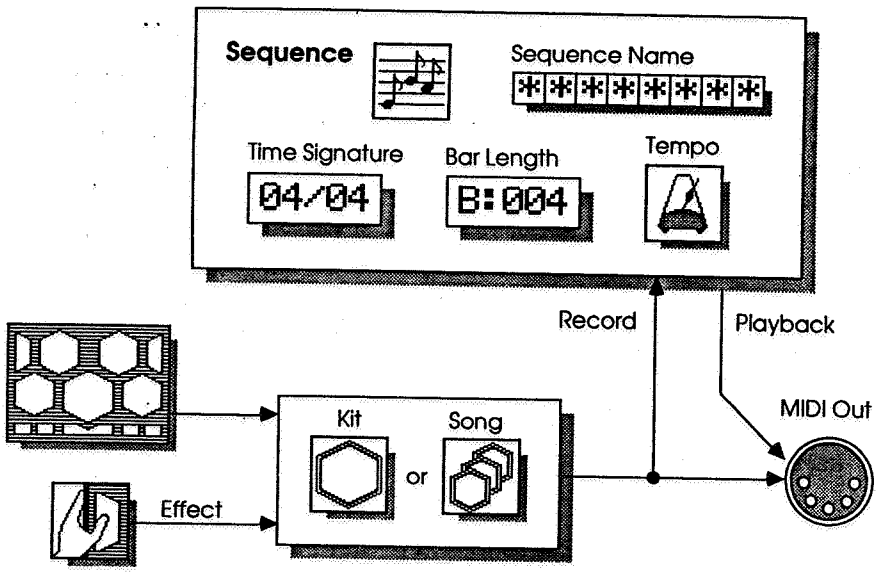
CREATING SEQUENCES

WHAT IS A SEQUENCE ?

A Sequence is a recording of a real-time performance, played on the Pads. You can create 12 such Sequences of up to 240 Bars in length. Each Sequence is fully Dynamic, up to 8 Notes polyphonic and can be multi-tracked by overdubbing as many times as you wish, within the confines of the available Memory. The Tempo, Time Signature and Bar Length are also stored with the Sequence at record time.

When the Sequencer is recording, it is actually storing the MIDI data sent to the MIDI Out socket. Therefore you can record a performance using any combination of your Kits or Songs. You can even change Kits between Overdubs.

On playback the Sequencer recalls the stored MIDI data and sends it to the MIDI Out socket. Sequences can be played through once, or looped continuously, while still allowing you to play the Pads.



The amount of Memory used to store these Sequences depends not on the length but on the complexity of the performance. The Sequencer can store a total of around 10,000 events. Performance Effects can be recorded from the CymFX Pad or Pedal but will use up much more Memory than single Pad hits.

SELECTING A SEQUENCE

Play

Pressing the Play button invokes the Sequencer. The Sequence number flashes allowing you to select a Sequence. Eight characters next to each number are available to name your Sequences for easy identification.

If a Sequence has already been recorded **Trak** will be displayed.

```
SEQ:01 DemoTrak
PLAY:Trak→ ♩:120
```

You can play a Sequence by pressing **Start/Stop**. The display will change to a Bar Count on Playback.

```
SEQ:01 DemoTrak
PLAY B:001 ♩:120
```

Stop the Sequence by pressing **Start/Stop** again. The display will revert toSequence selection.

```
SEQ:01 DemoTrak
PLAY:Trak→ ♩:120
```

Select a Sequence, from 1 to 12, until you find an Empty one.

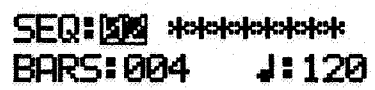
```
SEQ:05 ********
PLAY:Empty ♩:120
```

You can re-record or overdub Sequences, but for the moment we'll record with an Empty one.

RECORDING YOUR FIRST TRACK

Record

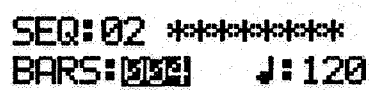
Pressing the Record button allows the Empty Sequence to be recorded.



Before recording a new Sequence, you must specify the Time Signature, along with the Track Length and Tempo. The values you select will be stored with the Sequence.

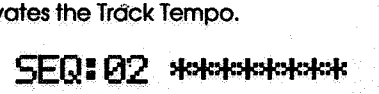
Select the Metronome Menu if you wish to change the Time Signature, otherwise the last setting will be used. The default value is 4/4.

Activates the Track Length.



Selects the Track Length from 1 to 240 Bars, default 4.

Activates the Track Tempo.



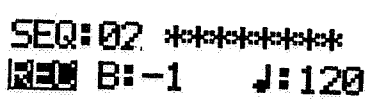
Selects the Track Tempo from 40 to 240 BPM, default 120.

Activates the Sequence select again.

Start/Stop starts the Sequencer recording.

FROM HIT

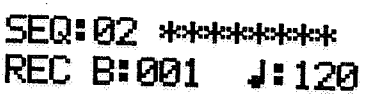
If you selected the **From Hit** Record Mode, from the Metronome Menu, **REC** will be flashing and the Bar Count will be at -1.



The Sequencer starts recording on your first Pad hit.

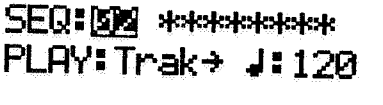
COUNT IN

If you selected the **Count In** Record Mode, from the Metronome Menu, REC will be flash while the Bar Count counts down -2, -1 then starts recording.



You can press Start/Stop at any time during the recording. If the sequence has not reached the selected number of Bars when you press Start/Stop, recording will continue to the end of the current Bar.

Once the required number of Bars have been recorded, the Sequencer will jump to Play allowing you to hear what you've recorded.



Start/Stop plays back the recorded Sequence.

You can change the way the Sequence is played back by making it loop continuously, or changing the Tempo.

Activates the Loop selector.

```
SEQ:02 ********
PLAY:Trak1 ♩:120
```

Selects the Loop type:

- → Sequence plays once.
- ↻ Sequence Loops continuously.

Activates the Play Tempo.

```
SEQ:02 ********
PLAY:Trak→ ♩:120
```

Selects the Playback Tempo from 40 to 240 BPM.

Activates the Sequence select again.

RECORDING AN OVERDUB TRACK

Record

Pressing the Record button once you have recorded your first Track allows you to record an OverDub Track which consists of the first Track and any new Pad hits.

```
SEQ:02 ********
REC:1Trk→  ♩:120
```

Time Signature and Tempo will be the same as that selected for the first Track. If you wish to change either of these you will have to select an Empty Sequence or Clear one of the others.

LOOP SELECTOR

A Loop selector is available when you record an OverDub Track. If the Loop is **Off** the first Track will play back **Once** while recording the OverDub Track, then stop them both. If the Loop is **On** the first Track will play **Continuously**,while recording the OverDub Track, until the Start/Stop button is pressed or a maximum number of 240 Bars has been reached.

Activates the Loop selector.

```
SEQ:02 ********
REC:ODub1  ♩:120
```

Selects the Loop type:

- → Track 1 plays once during OverDub, then stops recording.
- ↻ Track 1 Loops continuously during OverDub, until stopped.

Activates the Track selector again.

```
SEQ:02 ********
REC:1Trk?  ♩:120
```

Start/Stop starts the OverDub recording according to the current Record Mode. Recording starts on the first Pad hit if **From Hit** is selected, or after 2 Bars if **Count In** is selected

```
SEQ:02 ********
REC B:001  ♩:120
```

The first Track will be played back from Bar 1 and recorded along with a new performance to form the OverDub Track. If you made the first Track Loop continuously using the Loop Selector, press the Start/Stop button to stop the recording. If the Loop was not selected, the OverDub Track will stop when the first Track stops.

You can press Start/Stop at any time during the recording but the Sequencer will continue to the end of the current Bar and the Overdub Track will be shortened to the chosen number of Bars.

Once the required number of Bars have been recorded, the Sequencer will jump to Play allowing you to hear your OverDub Track.

```
SEQ:02 ********
PLAY:ODub→ ♩:120
```

Start/Stop plays back the recorded OverDub.

You can compare this OverDub Track with the original Track if you wish.

Activates the Track selector.

```
SEQ:02 ********
PLAY:Trak→ ♩:120
```

Selects the Track :

Trak	Original Track (Up)
ODub	Current OverDub (Down)

Start/Stop plays back the selected Track.

Activates the Sequence selector again.

SAVING YOUR OVERDUB

Once you have recorded an OverDub Track, you can play either the original Track or the OverDub. When you leave Play Mode, however, you will be asked if you wish to Save the current OverDub Track.

```
SEQ:02 ********
SAVE OVERDUB ?
```

You now have 3 choices :

Play Cancels the Save request and returns to the Play Mode.

Yes Saves the OverDub Track in place of the original.

No Erases the OverDub, leaving the original Track as it was.

OUT OF MEMORY MESSAGE

If you run out of Memory while recording an Overdub the following message will be displayed ...

```
SEQ:XX ********
OUT OF MEMORY
```

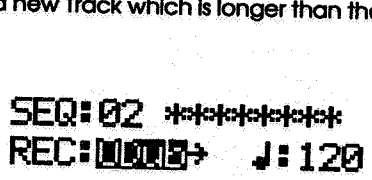
The Overdub being recorded when the message was displayed will not be retained, but the original Track will remain intact.

This message will also be displayed when you press Start/Stop and there is not enough room to record another Sequence or Overdub. Or, when there is not enough Memory left for you to Copy a Sequence. If you wish to Record or Copy another Sequence you will have to clear one of the others to create more room.

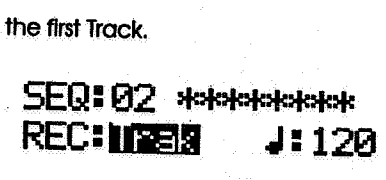
RE-RECORDING THE FIRST TRACK

If you no longer wish to use a Track that you previously recorded, you can Re-Record over it. However, the Track Length will be the same as that used for the original Track. You should use the Clear function in the Special Menu, to erase the Sequence completely if you wish to create a new Track which is longer than the original.

Record

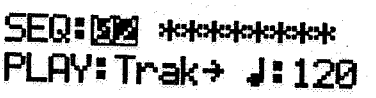


Selects the first Track.



Start/Stop starts recording the first Track again, according to the current Record Mode. Recording starts on the first Pad hit if **From Hit** is selected, or after 2 Bars if **Count In** is selected.

Once the required number of Bars have been recorded, the Sequencer will jump to Play allowing you to hear your new Track.



Start/Stop plays back the new Track.

SPECIAL FUNCTIONS

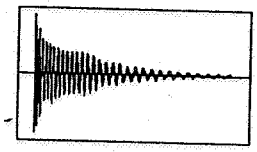
The following SPECIAL buttons allow you to LEARN™ the External Inputs and access a Menu of system parameters. Both functions can be invoked at any time within a Kit, Song or Sequence.

LEARN

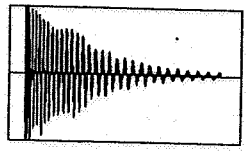
If you have ever tried to Trigger a Drum Brain from a Line or Mic signal you will be well aware of the problems involved with level matching and re-triggering.

LEARN™ is a function which allows PortaKit to produce a clean Trigger quickly and easily. It does this by matching the signal level and then 'Learning' the Profile, or Envelope Shape, of a signal connected to any one of the 6 External Inputs. You can connect a number of different Audio Sources, ranging from Simmons Pads, to Line Level signals from Tape, to Acoustic Drum Mics.

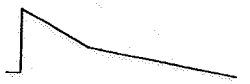
The process of Learning is very similar to Sampling, only we are concerned with the overall Envelope shape of the Sample, not the contents.



A typical Snare Drum waveform looks like this. In Learn mode we can view the level of this waveform on PortaKit's Dynamic Level Meter.



The drum should be hit with maximum dynamic to establish the Dynamic Range. The Gain on PortaKit can then be adjusted so that the signal reaches maximum amplitude without clipping.

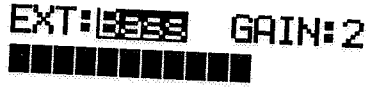


Once the signal levels have been matched, the Learn is armed and the drum hit again. This time PortaKit will analyse the waveform and reconstructs the Envelope Shape numerically.

Now whenever you hit the drum, its envelope will be compared to PortaKit's reconstruction. If the level is greater than the 'learned' value, this will be treated as a new hit.

ADJUSTING THE GAIN

When Learn is pressed, the bottom line of the LCD becomes a Dynamic Level Meter. Note that no MIDI is transmitted in Learn Mode, so no sound will be heard when a Pad is struck.



Selects one of the 6 External Pads.

Bass
Perc 1
Perc 2
Perc 3
Perc 4
Cym 2

When you have several Inputs connected, select the one you wish to Learn. Any trigger on another Input will be ignored and will not make that Input active.

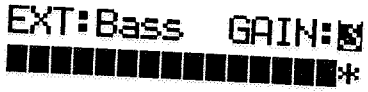
Activates the chosen Input's Gain setting.

The **Gain** value can be set to **P** or adjusted from **1** to **8**. The following table gives a list of typical settings.

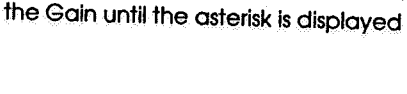
P	Gain and Learn setting for PortaKit Pads.
1-3	Simmons Piezo Pads
4-5	Line Level Signals
6-8	Microphone Level Signals

Adjust the Gain so that a hard hit shows full scale on the Dynamic Level Meter, without clipping.

When full scale is reached, an * is displayed, this indicates that the Gain setting is correct for this weight of hit.



If the hit clips, an exclaimation mark is displayed.

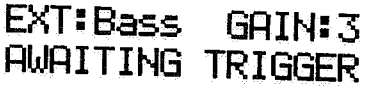


Decrease the Gain until the asterisk is displayed for a hard hit.

LEARNING THE PROFILE

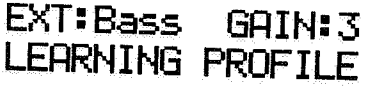
Once you have adjusted the Gain setting to the correct Level for the External signal you can Learn it's Envelope Shape.

Start/Stop arms the Profile Learn.

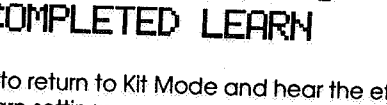


If you want to abort the Learn Profile press **Kit/Song** to return to the Kit Mode.

When a full-scale hit is received from the selected External Input the Profile Learn is activated.



This message is displayed for approx 4 seconds, while the Profile of the hit is calculated and reconstructed numerically. Once the calculations have finished a Completed message is displayed.



Press **Kit/Song** to return to Kit Mode and hear the effect of the new Learn settings.

If the Gain is too high, causing the signal to clip during the Learn period, the following error message will be displayed for a few seconds.

```
EXT:Bass  GAIN:3
GAIN TOO HIGH !
```

Press **Start/Stop** to arm the Profile Learn again and try learning a slightly lighter hit from the External Input.

The Gain setting and Learn data is retained for each of the 6 External Inputs.

SELECTING PAD LEARN PARAMETERS

Once you have learned the Profile of an External Input the Learn parameters which represent the Envelope shape are retained. However, you may wish to temporarily disconnect an External Input and use the PortaKit's own Playing Surface which will almost certainly have different Learn parameters.

To select the normal Pad Learn parameters simply decrease the gain until 'P' is flashing. This selects the correct gain and Learn parameters for the rubber Playing Surface.

```
EXT:Cym-2 GAIN:P
```

You can recall your External Input's Learn Parameters by selecting any gain setting other than 'P'.

SPECIAL MENU

The Special Menu allows access to 4 Utility functions and several Global parameters for the instrument. When the Menu button is pressed the Menu is displayed with the first choice flashing.

Each of the 4 Utility functions, Name, Clear, Copy or SysEx will display the current Kit, Song or Sequence depending on the mode Special was invoked from.

If invoked from Kit 12 :

```
SPECIAL:Name
Kit:12 ********
```

If invoked from Song 3:

```
SPECIAL:Name
Song:03 ********
```

If invoked from Sequence 9:

```
SPECIAL:Name
Seq:09 ********
```

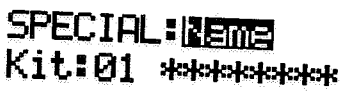
Using the Up or Down buttons you can step up or down through the Menu choices :

Name	Name any Kit, Song or Sequence.
Clear	Clear any Kit, Song or Sequence.
Copy	Copy any Kit, Song or Sequence.
Merge	Merge incoming MIDI with Pad events.
Midi 2	Select the state of MIDI Output 2.
Midi In	Select MIDI Receive Channel.
Lcd	Adjust LCD Contrast.
KeyClick	Turn KeyClick On or Off.
SysEx	Save or Load Data via MIDI.
Scan	Select All or External Pad Scan.

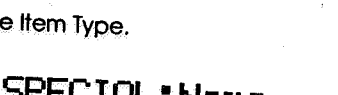
To leave the Special Menu, select any other button in the Sequencer, Metronome or Mode sections.
Any changes made will be retained.

SPECIAL MENU — NAME

Name is a Utility function which allows any Kit, Song or Sequence to be given a label of 8 Alphanumeric characters. The name selected will always be shown next to the corresponding Kit, Song or Sequence number for instant identification.



Activates the Item Type.



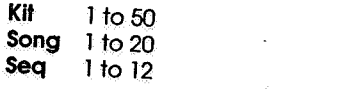
Selects the Item Type : **Kit**, **Song** or **Seq**.

Activates the Item number.

Selects the Item number :

Kit	1 to 50
Song	1 to 20
Seq	1 to 12

Activates the First Character of the Name.



Selects an Alphanumeric character :

(SP) ! " # ( ) * - . / ?
a b c d e f g h i j k l m n o p q r s t u v w x y z (SP)
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9

Activates the next Character of the Name.

Continue this way until all of the Characters have been assigned.

To make a Name to be shorter than 8 Characters assign a space (SP) to the unwanted Characters.

If you make a mistake or change your mind you can step back through the Name using the Left button.

Activates the previous Character of the Name.

SPECIAL MENU — CLEAR

Clear is a Utility function which allows any **Kit, Song** or **Sequence** to be initialised with it's default settings. You can also Clear **All Memory** which will initialise all Kits, Songs and Sequences along with Instruments Global Parameters. See page 99 in the Appendix for a list of all the default settings.

```
SPECIAL:Clear
Kit:01 ********
```

Activates the Item Type.

```
SPECIAL:Clear
Kit:01  ?
```

Selects the Item Type : **Kit, Song, Seq** or **All Mem.**

Activates the Item number.

```
SPECIAL:Clear
Kit:01  ?
```

Selects the Item number :

Kit	1 to 50
Song	1 to 20
Seq	1 to 12
All Mem	No Item number

Arms the Clear function.

```
SPECIAL:Clear
Kit:01  (Y/N)
```


Once the Clear function is armed you have 3 choices :

Activates the Menu choice 'Clear' again.

Pressing Down (No) cancels Clear and exits to the Mode Special was invoked from.

Pressing Up (Yes) activates the Clear function.

A warning message will be displayed before the Clear is performed.

```
CLEAR KIT:01
ARE YOU SURE ?
```

This time you have 2 Choices :

Pressing Down (No) cancels Clear and Activates the Menu choice 'Clear' again.

Pressing Up (Yes) performs the Clear function.

```
CLEAR KIT:01
IN PROGRESS !
```

SPECIAL MENU COPY

Copy is a Utility function which allows any **Kit, Song** or **Sequence** to be copied onto another Kit, Song or Sequence. In other words, the Destination item is replaced by a duplicate of the Source item.

```
SPECIAL:Copy
Kit:01 → KIT:01?
```

Activates the Source Item Type.

```
SPECIAL:Copy
Kit:01 → KIT:01?
```

Selects the Source Item : **Kit, Song, Seq.**

Activates the Source Item number.

```
SPECIAL:Copy
Kit:01 → KIT:01?
```

Selects the Source Item number :

Kit	1 to 50
Song	1 to 20
Seq	1 to 12

Activates the Destination Item number.

```
SPECIAL:Copy
Kit:01 → KIT:01?
```

Selects the Destination Item number.

Arms the Copy function.

```
SPECIAL:Copy
Kit:01 → KIT:02
```

Once the Copy function is armed you have 3 choices :

Activates the Menu choice 'Copy' again.

Pressing Down (No) cancels Copy and exits to the Mode Special was invoked from.

Pressing Up (Yes) activates the Copy function.

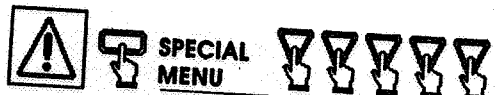
A warning message is displayed before the Copy is performed.

```
COPY KIT:01 → 02
ARE YOU SURE
```

This time you have 2 Choices :

Pressing Down (No) cancels Copy and Activates the Menu choice 'Copy' again.

Pressing Up (Yes) performs the Copy function.



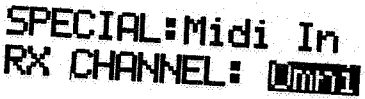
SPECIAL MENU — MIDI IN

MIDI In allows you to select the MIDI Channel for received data. This channel is used by Portakit to receive Program Changes on and transmit or receive System Exclusive messages.

Omni
When Omni is selected PortaKit will recognise MIDI data regardless of what Channel it is on.

1 to 16
When a Channel from 1 to 16 is selected, PortaKit will only recognise MIDI data received on the selected Channel.

Activates the receive MIDI Channel selection.



Selects the Channel : **Omni** or **1** to **16.**

Activates the Menu choice 'Midi In' again.

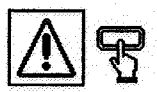
SPECIAL MENU — LCD

LCD contrast allows you to select the viewing angle of the LCD display. You may wish to do this when you change the Portakit's mounting position.

Activates the LCD Contrast selection.

Selects the LCD Contrast : **1** to **8.**

Activates the Menu choice 'Lcd' again.



SPECIAL MENU — KEYCLICK

KeyClick allows the Beep produced when you press a button to be turned On or Off. Note that when you Power-up KeyClick will always be turned On.

```
SPECIAL:KeyClick
CLICK: On
```

Activates the Keyclick selection.

Selects KeyClick **On**.

```
SPECIAL:KeyClick
CLICK: On
```

Selects KeyClick **Off**.

```
SPECIAL:KeyClick
CLICK: Off
```

Activates the Menu choice 'KeyClick' again.

SPECIAL MENU — SYSEX

MIDI System Exclusive messages allow manufacturers to transmit and receive data which is specific to their products. Each manufacturer is assigned their own unique ID which is included in every transmission. Simmons' ID is 38H. If a MIDI instrument receives a System Exclusive Message it will check for it's own ID number first. If the ID is different the message will be ignored.

PortaKit uses System Exclusive messages to transfer Kits, Songs and Sequences. This allows you to swap information between PortaKits, or save and load information to a computer which supports MIDI System Exclusive Transfers.

If you are interested in writing your own Editor, or similar support Program, contact Simmons Music Services for details of the System Exclusive Message format.

SAVING PORTAKIT DATA

When you select **SysEx**, the current Kit, Song or Sequence will be displayed, depending on which mode the Special Menu was invoked from.

If it was Kit Mode the display would be as follows ...

```
SPECIAL:SysEx
SAVE Kit:01   ?
```

.Activates the Item Type.

```
SPECIAL:SysEx
SAVE Kit:01   ?
```

Selects the Item Type :

Kit
Song
Sequence
All Mem

Activates the Item number.

```
SPECIAL:SysEx
SAVE Kit:01   ?
```

Selects the Item number :

Kit	1-50 or All.
Song	1-20 or All.
Sequence	1-12 or All.
All Memory	No Item Number

When **All** is selected for the Item number, all Kits, Songs or Sequences will be sent.

Arms the Save function.

```
SPECIAL:SysEx
SAVE Kit:01
```

Once the Save is armed you have 2 choices ...

Pressing Down (No) cancels the Save and activates the Menu choice 'SysEx' again.

Pressing Up (Yes) performs the Save operation.

```
SPECIAL:SysEx
SAVED   Kit:01
```

Since large Sequences can take a few seconds to transmit, a SAVING message is displayed while the data is being transmitted, followed by the SAVED message.

```
SPECIAL:SysEx
SAVING Seq:XX
```

You can abort the SysEx function at any time, by pressing the Kit/Song button, except while data is being Saved.

LOADING PORTAKIT DATA

Portakit will recognise valid messages at any time while the unit is in the System Exclusive state.

```
SPECIAL:
SAVE Kit:01   ?
```

You don't need to select the Item number or type as this will be selected automatically when a valid MIDI message is received.

PortaKit will recognise data from another PortaKit or MIDI equipped computer. Before it is loaded the data will be validated. A check is made to see if it is a SIMMONS message, which MIDI channel it is on (selected by MIDI In from the special menu), and if it is for PortaKit.

If the message is valid the bottom line will change to one of the following, depending on the message received:

```
LOADED  KIT:XX
LOADED  SONG:XX
LOADING SEQ:XX
LOADED  SEQ:XX
LOADED  Globals
```

The previous Memory contents will be erased and replaced with the incoming MIDI data. Note that an individual load cannot be aborted once it has started.

Global data is only transmitted when **All Memory** is selected. This contains all of the System Parameters for the instrument.

REQUESTING PORTAKIT DATA

If you send a System Exclusive data request to PortaKit, it will transmit the required data regardless of the current mode.

This feature has been included to allow computers running System Exclusive transfer programs to Request and Save data remotely without having to initiate the Save from PortaKit.

All other functions will be suspended while the data is transmitted. The bottom line of the display will show the item type and number saved :

```
SAVED   Kit:01
SAVED   Song:01
SAVING  Seq:01
SAVED   Seq:01
SAVED   Globals
```

Contact Simmons Music Services if you require more details about the System Exclusive message format.

SPECIAL MENU — SCAN

Normally PortaKit scans all 14 Pads to determine whether there has been a hit on any Pad. Once a hit has been recognised a MIDI Note is transmitted for that Pad. This takes a finite amount of time, normally around 2 milliseconds (thousandth's of a second) for any of the rubber playing surfaces.

When an External Input is used there will be more of a delay since PortaKit must wait for the external signal to reach it's maximum dynamic before sending the MIDI Note. This normally takes around 8 milliseconds which may become a problem when added to the delay produced by some MIDI voicing units.

You can shorten this delay by selecting whether all 14 Pads are scanned, or just the 6 External Inputs. When the **Externals** are selected PortaKit will scan round the External Inputs twice as fast, thereby reducing the delay to around 4 milliseconds.

```
SPECIAL:Scan
PADS: All
```

Activates the Pad selection.

Selects **All**.

```
SPECIAL:Scan
PADS: All
```

Selects **Externals**.

```
SPECIAL:Scan
PADS: Externals
```

Activates the Menu choice 'Scan' again.

Note :
The **All** setting will always be selected on power-up.

APPENDIX

MIDI Implementation Chart

MODEL : Simmons PortaKit

Date : June 1988
Version : 1.0

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Channel	1 to 16 per Pad.	Omni 1 to 16	Receive is Global. Transmit is by Pad.
Mode	Default Messages Altered	No No No	Omni No Poly	Receive Channel can be Omni or 1 to 16.
Note Number	 True Voice	0 to 127 per Pad. N/A.	0 to 127. N/A.	Notes received are only used for easy MIDI Assignment.
Velocity	Note ON Note OFF	Yes Yes, Note ON velocity 0.	Yes Yes	Note OFF sent after selected Duration or by Gt Damp.
After Touch	Key's Ch's	No Yes	No No	Can be Transmitted by FX Pad or Pedal.
Pitch Bender		Yes	No	Can be Transmitted by FX Pad or Pedal.
Control Change		0 to 95	No	Can be Transmitted by FX Pad or Pedal.
Prog Change	True #	1 to 128	1 to 128 Kits 1 to 50.	Transmitted for each Kit Channel.
System Exclusive		Yes	Yes	For Kit, Song & Seq Transfer.
System Common	: Song Pos : Song Sel : Tune	No Yes No	No No No	Song Selects can be generated by a PortaKit Song.
System Real Time	: Clock : Commands	Yes Yes	Yes Yes	Received when sync'ing from MIDI.
Aux Messages	: Local ON/OFF : All Notes Off : Active Sense : Reset	No No No No	No No No No	
Notes		When MIDI Merge is enabled, all Data received at MIDI In will be merged with MIDI produced by Pad hits. Running Status data will be converted to it's normal form.		

DEFAULT SETTINGS

KIT VALUES

Parameter	Range	Default
Kit Name	8 Alphanumeric Characters	.....
Note Type	Note, Echo, Chord	Note
Note Value	Bass C-2 to G8 (0 to 127)	C2(48)
	Snare C-2 to G8 (0 to 127)	C#2 (49)
	Rim C-2 to G8 (0 to 127)	D2 (50)
	Tom-1 C-2 to G8 (0 to 127)	D#2 (51)
	Tom-2 C-2 to G8 (0 to 127)	E2 (52)
	Tom-3 C-2 to G8 (0 to 127)	F2 (53)
	Perc1 C-2 to G8 (0 to 127)	F#2 (54)
	Perc2 C-2 to G8 (0 to 127)	G2 (55)
	Perc3 C-2 to G8 (0 to 127)	G#2 (56)
	Perc4 C-2 to G8 (0 to 127)	A2 (57)
	CymFx C-2 to G8 (0 to 127)	A#2 (58)
	Cym-2 C-2 to G8 (0 to 127)	B2 (59)
	HH -Op C-2 to G8 (0 to 127)	C3 (60)
	HH -Cd C-2 to G8 (0 to 127)	C#3 (61)
Note Duration	0 to 255 Duration Elements.	12
Echo Spacing	0 to 255 Duration Elements.	12
Chord Type	Major, Minor, Major 7th, Minor 7th.	Major
Dynamic Control	On or Off.	Off
Dynamic Curve	1 to 10.	5
Min Level	1 to 99.	1
MIDI Channel	1 to 16.	1
MIDI Program	Off or 1 to 128.	Off
Effect Type	Off, PB Up, PB Down, After Touch, Control Change 0 to 95, Gate Damp.	Off
Effect Channel	Current Kit Channel.	1
Tempo	Off or 40 to 240 Beats Per Minute.	Off

SONG VALUES

Song Name	8 Alphanumeric Characters	.....
Events	20	1
Kit Number	Off, 1 to 50	Off
MIDI Command	Off, Start, Stop, Continue	Off
MIDI Song Select	Off, 1 to 128	Off

SYSTEM VALUES

Tick	On or Off	On
Time Signature	1 to 12/2, 1 to 12/4, 1 to 12/8	4/4
Resolution	Low or High	Low
Quantise	1/4, 1/6, 1/8, 1/12, 1/16, 1/24, 1/32, Off	1/16
Record Mode	From Hit or Count In	Count In
Sync	Internal, Int & MIDI or From MIDI	Internal
Midi Merge	On or Off	Off
Midi Out 2	Thru or Out 2	Thru
Midi In Channel	Omni or 1 to 16	Omni
LCD Contrast	1 to 8	4
KeyClick	On or Off	On
Scan	All or External	All

SPECIFICATION

PADS	12 fully dynamic Pads utilising Force Sensing Films and a hi-bounce rubber playing surface, 10 assignable Dynamic Curves.
MIDI	Fully programmable MIDI interface. MIDI Note per Pad (Single/4 note Chord - Note Duration 0-2.5 seconds / Echoed Note with Dynamic Control). MIDI Channel per Pad. MIDI Program Change per Channel assigned. Generates/Reads MIDI Clock. System Exclusive Save from/Load to MIDI.
SEQUENCER	12 Polyphonic Sequences with a total sequence capacity of approximately 10,000 events. Record/ Overdub/ Play modes. Programmable Tempo 40-240 BPM. Quantise on record.
EFFECTS	MIDI Pitch Bend Up/Down, Aftertouch, Control Changes and Gate Damp all proportional to pressure exerted on the CymFx Pad or Effect Pedal.
KITS	50 programmable Kit memories. Data stored: MIDI parameters, Dynamic Curve, Effect, Kit Tempo.
SONGS	20 Songs, each up to 20 events in length. Events can be recalled in a pre-programmed sequence by Up/Down buttons or optional footswitch. Data stored as an event: Kit number 1-50, MIDI command Start/Stop/Continue, MIDI Song Select 1-128.
METRONOME	Audio click on/off. Sync source - Internal/Internal & Midi/Sync from MIDI clock.
LEARN™	6 External Inputs for Pads/ Bugs/ Acoustic Drum Mics, with 8 gain settings and Envelope Profile Learn.
DISPLAY	16 character by 2 line backlit LCD with 8 contrast settings. Kit memories, Sequences and Songs can all be named with 8 chars.
EXTERNAL INPUTS	6 External Inputs for Acoustic Drum Mic's / Bugs / Pads. MIDI In (Merge, Kit select, MIDI sync, SysEx). Hi-Hat Pedal. Effect Pedal. Up/Down Footswitch. Start/Stop Footswitch.
OUTPUTS	Metronome audio out. MIDI Out 1 MIDI Out 2 / Thru.
CONTROL PANEL	Mode — Kit/Song Edit Kit — Note Type, Note Duration, Dynamic Control, Dynamic Curve, MIDI Channel, MIDI Program, Effect, Tempo. Edit Song — Kit Number, MIDI Command, Song Select, End Song. Metronome — Start/Stop, Menu. Sequencer — Record, Play. Special — Learn, Menu. Data Entry — Up/Down, Left/Right.
DIMENSIONS	495mm / 470mm / 135mm.

PORTAKIT V1.5 ADDENDUM

22nd August 1988

A new feature has been added to PortaKit since the User Manual was printed. Software Version 1.5 allows the position of the Hi-Hat and Tom-3 Pads to be swapped.

SPECIAL MENU ... HiHat

This function has been added to the Special Menu.

Normally the Hi-Hat Pad is on the left-hand side of the Snare Pad. You can move it to the right-hand side, swapping the position with Tom-3, by choosing **HiHat** from the Special Menu.

```
SPECIAL:HiHat
PAD ASSIGN: Left
```

Activates the Pad assignment.

```
SPECIAL:HiHat
PAD ASSIGN: Left
```

Selects **Right**.

```
SPECIAL:HiHat
PAD ASSIGN:Right
```

Activates the Menu choice 'HiHat' again.

In Kit Edit mode hitting the right-hand Pad will now display **HiHat** and the left-hand Pad **Tom-3**.

The Hi-Hat Pedal still controls the Open and Closed position, but now effects the right-hand Pad.

The chosen position will be retained on power-down but will be reset to Left when All Memory is cleared.