_ The Pre-Alpha Test Award of Courage goes to Penny Hanna.

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*_ This manual is printed on recycled paper _*

# TEXTURE 4
## TABLE OF CONTENTS


Introduction

| | |
|---|---|
| Chapter 1 | System Setup |
| Chapter 2 | Texture Fundamentals |
| Chapter 3 | A Quick Tutorial |
| Chapter 4 | Screen Display & User Interface |
| Chapter 5 | MIDI Setup & Work Environment |
| Chapter 6 | Recording & Playback |
| Chapter 7 | File Management & DOS |
| Chapter 8 | Editing MIDI Data |
| Chapter 9 | Link Mode |
| Chapter 10 | Synchronization |
| Appendix I | Help Display |
| Appendix II | Music Quest Interfaces |
| Appendix III | Yamaha C1 |
| Appendix IV | CMS UART Ports |

Index

# TEXTURE 4

## INTRODUCTION


Warranty 1
Warranty Exclusions 2
Copyright Notice & License Agreement 2
Service Restrictions 3

# TEXTURE 4

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**MIDI SEQUENCER SOFTWARE**
**BY ROGER POWELL & SLIM HEILPERN**

Manual written by Slim Heilpern, Penny Hanna, Roger Powell
and Richard Einhorn

*Fourth Edition: January 1992*

*Thanks for purchasing Texture 4. We've tried to structure this manual so that you may easily get as much or as little information as you need from it. You don't have to read the entire manual to be able to use Texture. Wherever possible, each chapter is organized by degree of complexity, starting with the simplest elements of the subject being discussed. When you find you are getting in deeper than you need to be, move on to the next chapter. At some later date you may wish to go back and tackle the tougher material.*

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# TEXTURE 4

## CHAPTER 1
## SYSTEM SETUP


Requirements 1
MIDI Interface Installation 2
Interrupt (IRQ) Settings 2
Interrupt Command Line Switch 2
Base Address Command Line Switch 3
Instrument Setup 3
Creating A Backup File 4
Installing Texture 5
Running Texture 6
Overlay Version 6
RAM Version 6
Video Display Switch 7
Microsoft Windows 8
DOS 5 & LOADHIGH 8

# CHAPTER 1
# SYSTEM SETUP

*This chapter covers the various steps involved in setting up your hardware and installing Texture. There are many issues which are beyond the scope of this manual which are related to your specific computer, keyboards, MIDI interface, etc. If you can't seem to get your system working, first try to simplify your setup to the bare minimum to see if you can isolate the problem. If you're still experiencing problems, call, FAX or write Magnetic Music's Customer Support.*

*There are appendices at the back of this manual which are directed at a few specific MIDI interfaces and the Yamaha C1 computer. Please check to see if one of these appendices addresses your particular setup.*

---

## EQUIPMENT SETUP

### REQUIREMENTS

*Computer:*

_ IBM-PC/XT/AT/386/486 or 100% compatible computer (Texture may run on semi-compatibles, no guarantees) OR Yamaha C1 computer

_ Minimum of 512k RAM recommended (absolute minimum of 320k required)

_ PC-DOS or MS-DOS version 2.1 or greater

_ Minimum of one floppy disk drive

*MIDI Equipment:*

_ Roland MPU-401, MPU-IPC or compatible interface OR Yamaha C1 computer

_ At least two MIDI cables

_ At least one MIDI instrument with MIDI In and Out

_ An audio system to allow listening to the MIDI instrument(s)

---

## MIDI INTERFACE INSTALLATION

*Yamaha C1 users can ignore this section*

If you haven't yet installed your MIDI interface in your computer, be careful to follow the manufacturer's instructions closely. Depending on the particular interface you may or may not have some choices to make before installing the card. The following tips are meant to help augment the manufacturer's instructions:

### INTERRUPT (IRQ) SETTINGS

The default interrupt setting for all MPU-401 compatible interfaces is interrupt 2. True Roland MPU-401's do not have simple jumper or switch setting to change this, but the MPU-IPC and most compatibles do. Unfortunately, many computers have other devices that are using this interrupt. If you know of such a device on your computer, you should either change its interrupt or change the interrupt on the MIDI interface.

On many 286, 386 and 486 machines, there is simply no way to set things up so that interrupt 2 is clear. If you are using a true MPU-401 you will have to call Roland to obtain a detailed description of the procedure for changing the interrupt (it involves cutting a trace on the board and some soldering).

If you're not sure if you have a conflict or not, here's what to look for after you're up and running:

_ tempo fluctuations or "hiccups"

_ system crashes when playing or recording

### INTERRUPT COMMAND LINE SWITCH

If you decide to switch to an interrupt other than the default of 2, you will have to inform Texture of the non-default interrupt by using a command

line switch. If you're loading the Texture version TX.EXE and your interface is set on interrupt 5 you would load Texture with the following statement:

`TX /i:5` <**ENTER**>

(<ENTER> is a key on your computer keyboard and is not typed. The "5" in the above statement is the interrupt number, substitute the correct number for other settings)

Common alternate interrupt numbers are 3, 5 or 7. It may take some trial and error before you find the correct setting for your system.

### BASE ADDRESS COMMAND LINE SWITCH

In some unusual cases, you may have an address conflict in your system. The default MPU-401 and compatible address is 330 (Hex). If some device in your system is sharing that address, the results would be very unpredictable. Some MIDI interface cards allow you to change this address. If you need to do this, the command line switch is **b=***hhh* where *hhh* is the new hex address. The following would set the base address to 260 Hex.

`TX /B=260` <**ENTER**>

---

## INSTRUMENT SETUP

There are many ways to arrange MIDI instruments and a wide variety of devices to assist with complex routing issues. These devices include MIDI thru boxes, MIDI patch bays, MIDI Filters, MIDI mixers, etc.. A full discussion of this is beyond the scope of this manual and there are now several excellent books on the subject. Contact your local music store, MIDI bulletin board or publishing house for recommendations. There are also several magazines which run monthly columns on the subject which can be quite enlightening.

*Here are some basic tips:*

_ When a keyboard or sound module is in *Omni Off*, it can receive MIDI data on one of 16 MIDI channels. This allows different keyboards to

receive different parts even though they are connected to the same MIDI source. Each keyboard is *tuned in* to a different MIDI channel.

_ It is common to use one keyboard to play all the other keyboards, sound modules and drum machines in your system via MIDI. The keyboard that you will use as a *master* or *controller* keyboard should have its MIDI Out connected to the MIDI In of your MIDI interface.

_ If your controller keyboard is also a sound producing keyboard, it is usually best to set its *local* off. *Local off* will disable the connection of the keyboard's keyboard messages from the keyboard's sound producing section. If your keyboard doesn't have this capability, you may have to turn *MIDI Thru* off in Texture (see MIDI Thru) to prevent the keyboard from double-striking each note that you play.

_ All keyboards, sound modules and drum machines that you wish to have as part of your playback system should be plugged into the MIDI Out of your interface, either by using a MIDI thru box or by daisy-chaining them together. (To daisy-chain, connect the MIDI interface's MIDI out to the device 1's MIDI In, device 1's MIDI Thru to device 2's MIDI In, device 2's MIDI Thru to device 3's MIDI In, etc.)

_ If you are using more than one keyboard or sound module, it is most common to set them to *Omni Off* and *Poly On* modes.

_ If you are using a multi-timbral keyboard or sound module you may or may not want to set it to *multi-mode*, depending on how you wish to use it. In general, you'll have more voices available on one channel when not in multi-mode and more channels with fewer voices per channel when using multi-mode.

_ Set each receiving keyboard, sound module or drum machine to a unique MIDI channel (1-16).

If you have a multi-port interface or the Yamaha C1 computer, please read over the Appendix which applies to your hardware setup before moving on.

## CREATING A BACKUP DISK

You should have received two disks with the Texture package: one 5.25" double density 360k disk and one 3.5" double density 720k disk. You can use either of these disks to install Texture. Before installing Texture, we recommend that you make a backup of your Texture distribution disk. There are many ways of making a backup disk. If none of the ways mentioned here will work on your system, consult a DOS manual for further instruction.

One easy way to backup up your Texture disk is with the DOS *diskcopy* command. To use the diskcopy command you must have a blank disk which is of the same type as the Texture disk. It needn't be formatted, since diskcopy will invoke the format command if necessary.

*Single Floppy Drive System:*

Insert the appropriate Texture distribution disk (the one that fits!) into your floppy drive and type `diskcopy a: a:`. You will be prompted on the proper steps to take to make a backup. *Source* refers to the Texture distribution disk while *Target* refers to the copy you are making.

*Two Floppy Drives System:*

If you have two floppy drives which use the same size disks, you can also use the *diskcopy* command. Put the Texture distribution disk in drive **a:**, the blank disk in drive **b:** and type `diskcopy a: b:`. In this case the backup process is more or less automatic, follow the directions on screen.

Other DOS commands that can be used to make a backup are *backup*, *copy*, and *xcopy*. Consult your DOS manual for the specific usage.

---

## INSTALLING TEXTURE

To install Texture, you must either have a hard drive with at least 500k free, or a formatted floppy disk (preferably blank) with at least 250k free. There is a file on each of the Texture disks called **SETUP.EXE**. This little program will take you through the installation process. It will extract the correct files for your setup and place them on the drive/directory of your choice. These files are not copy protected. You may run **setup** from any floppy drive on your machine.

_ If you're installing from drive a:, at the DOS prompt, type:

`a:setup`
Then press <ENTER>.

_ If you're installing from drive b:, at the DOS prompt, type:
`b:setup`
Then press <ENTER>.

From this point on, follow the on-screen directions. When you are done, the proper files will have been extracted and placed on your destination disk. There will be a file on your target disk called **README**. This file contains last minute information that was not covered in this manual. Depending on your setup, there may be information in this file that is of great importance to you.

_ To view the file, type:
`readme`
Then press <**ENTER**>.

*Installing From One Floppy:*

If you have only one floppy drive and no hard drive, be prepared to spend about five minutes or so swapping disks. The setup program is not optimized for this setup. DOS will ask you to swap disks well over a dozen times.

Tell **setup** that you want to install from drive **b:** to drive **a:**. Whenever it asks you to insert the disk for drive **b:**, insert the Texture distribution disk into your **a:** drive. When it asks for drive **a:**, insert the disk you are installing to into the **a:** drive.

---

## RUNNING TEXTURE

In the following paragraphs, we will be referring to the *overlay* version and the *RAM* version of Texture. The only difference between the two versions is that the overlay version requires access to disk as you issue different commands, while the RAM version loads the entire program into Random Access Memory - no disk access is required except to save and load files.

There are actually four versions of Texture which are included on the distribution disks. Depending on your system configuration, one or two of these versions ended up on your target disk:

| | |
|---|---|
| TX.EXE | Texture, overlay version |
| TXR.EXE | Texture, RAM version |
| TXC.EXE | Texture, Yamaha C1 overlay version |
| TXCR.EXE | Texture, Yamaha C1 RAM version |

_ If you installed from a 3.5" floppy drive, you were asked which application you were installing.

_ If you requested the Yamaha C1 version, TXC.EXE and/or TXCR.EXE were copied to your target disk. Otherwise, TX.EXE and/or TXR.EXE were installed.

_ The overlay versions (TX.EXE or TXC.EXE) were only installed if you confirmed that you were installing to a hard disk.

> Yamaha C1 users: From this point on, all references to **TX** refer to **TXC** in your case. Likewise, references to **TXR** refer to **TXCR**. If you haven't already done so, read the Appendix for the Yamaha C1 before proceeding.

As a rule, you don't want to use the overlay version from a floppy disk. Access is slow and if you pull the disk out of the drive while the program is running, the Microsoft Overlay Manager starts writing messages directly to the screen which Texture can't easily intercept (the screen starts to look pretty funny in that case).

Therefore, the overlay version is just for the hard disk crowd. The advantage to using the overlay version is that you will have about 35k more space in RAM for song memory than with the RAM version. On most systems, the extra disk access is barely noticeable when compared with the RAM version. Even if you are using a hard disk, you may decide that you like the RAM version better and that you don't need the extra 35k.

_ To load the overlay version, type:
`tx`
Then press <**ENTER**>.

_ To load the RAM version type:
`txr`

Then press <**ENTER**>.

If you experience any problems running Texture, refer to the section on **Command Line Switches** in the **File Management and DOS** chapter. There are commands which affect the MIDI interface and the video display that may solve your problem.

## VIDEO DISPLAY SWITCH

If you're trying to run Texture with a mono screen with a CGA video card, add the **/m** switch when you boot Texture type:

`TX /M` <**ENTER**>
or
`TXR /M` <**ENTER**>

*Note: The overlay version should only be loaded from the Texture directory unless you've included the Texture directory in the* **PATH** *statement of your* **AUTOEXEC.BAT** *file. (If you're not familiar with how the auotexec.bat file and the* **PATH** *command work, consult your DOS manual.)*

*Don't change the name of TX.EXE using the DOS* **rename** *command. If you do, the overlay manager will complain when you try and run it. No harm is done if you rename it for storage purposes and later rename it back to TX.EXE.*

## MICROSOFT WINDOWS

It is possible to run Texture in a Windows version 3 window. Interrupt 2 is generally unusable in this case and you should avoid using other programs which access the MIDI interface at the same time. Please check the **README** file for any late-breaking information in this area.

## DOS 5 AND LOADHIGH

Early testing indicates that you can use **LOADHIGH** with Texture. As with Windows, interrupt 2 seems to be troublesome on most machines in this case. You must have a 386 or 486 machine to use LOADHIGH.

# CHAPTER 2
# TEXTURE FUNDAMENTALS


General Principles 1
General Specifications 3
Song 3
Patterns 3
Tracks 3
Notes 3
Sync 4
The Screen Display 5
Right Window 5
Left Window 6
Stop/Record/Play 6
Beat Notation 6
Beats Per Minute 6
Subbeats 7
End 7
Timebase Settings 8
Entering Beat Information 9

*In this chapter you will be presented with an overview of the capabilities and structures used in Texture 4. Read through the entire chapter to familiarize yourself with these important concepts before moving on.*

## GENERAL PRINCIPLES

```
Ö----------------------------------------->
°              SONG
°Ö-----------Ú-----------Ú-----------Ú--->
°°  LINK 1   °  LINK 2   °  LINK 3   °
°°Ö---------Ì°Ö---------Ì°Ö---------Ì°
°°°PATTERN 3°°°PATTERN 7°°°PATTERN 1°°
°°°Ö-------Ì°°°Ö-------Ì°°°Ö-------Ì°°
°°°°Track A°°°°°Track A°°°°°Track A°°°
°°°°Track B°°°°°Track B°°°°°Track B°°°
°°°°Track C°°°°°Track C°°°°°Track C°°°
°°°°-------°°°°°-------°°°°°-------°°°
°°°°Track X°°°°°Track X°°°°°Track X°°°
°°°Û-------ì°°°Û-------ì°°°Û-------ì°°
°°Û---------ì°Û---------ì°Û---------ì°
°Û-----------Ù-----------Ù-----------Ù--->
°
°Ö----------------------------------------->
°° LINEAR PATTERN
°°     Ö--------------------------------->
°°     °        Track A
°°     °        Track B
°°     °        Track C
°°     °        -------
°°     °        Track X
°°     Û--------------------------------->
°Û----------------------------------------->
Û----------------------------------------->
```

Texture is a program that enables the musician to manipulate MIDI data at different levels of detail. Texture organizes musical time so that you can

easily work with increments as small as 1/192nd of a beat or structures as large as a complete piece of music.

The largest musical structure in Texture is called a *Song*. Songs are made up of a combination of *Links* and, if designated, a *Linear Pattern*.

Links are a list of *Patterns*. Patterns are a set number of *Beats*. Beats are divided into 24 distinct *Subbeats* (each subbeat being equivalent to one MIDI Clock). Each Subbeat is further divided into *Time Base Units* (TBU's). The number of TBU's per Subbeat is dependent on the setting of the system *Timebase*. The default Timebase is 96 TBU's per beat (equivalent to 4 TBU's per Subbeat). The Timebase is user-selectable (48, 72, 96, 120, 144, 168 or 192).

A Linear Pattern may be optionally designated and will record and play simultaneously with the linked patterns when in Link Mode. The Linear Pattern shares track names, channel and port assignments with the other patterns, but effectively provides a total of 48 tracks in link mode.

This hierarchical approach is quite fluid. You are not, however, obligated to follow the Song/Link/Pattern/Beat arrangement to the letter. Its main purpose is simply to facilitate the editing of a piece of music; it enables you to work at the most appropriate musical "level" for the task you wish to accomplish. Sometimes it's important to work on an entire phrase, sometimes a single note just needs to be changed. Often entire sections of a song have to be rearranged. Texture lets you do it, with a minimum of conceptual clutter and a minimum of fuss.

Because Texture provides you with many different editing tools, there are often several different ways to accomplish the same task.

You work on one song at a time with Texture. A song in Texture consists of one or more patterns that have been linked together in Link mode. A pattern contains up to 24 tracks (A-X) of MIDI data of a defined duration from 1 to 2728 beats. Patterns can be resolved to subbeats, in other words, a pattern could be 32:06 (32 and 6/24ths) beats long if you so desire.

*Note: When you Save a Song to disk, all active Patterns are saved, including ones that have not been assigned to Links. Therefore, unlinked Patterns can be thought of as the "raw material" of a Song. Patterns are considered "active" if they either contain MIDI data, OR have been named, OR have been assigned to a Link.*

Each track in Texture may be assigned to a single MIDI channel (1-16) or maybe set up to broadcast to several different MIDI channels <*****> based on each MIDI event's channel designation. Each track carries with it a MIDI output port assignment (1-8, the default is 1). The actual multiple MIDI output port capability is determined by which MIDI Interface you are using.

Tracks can be thought of as similar to the tracks of a multi-track tape recorder: they are used for recording, playback and "over-dubbing" in much the same way. Track names, channel and port assignments remain constant from one pattern to another in a Texture Song.

## GENERAL SPECIFICATIONS

_ **Song**: A song may contain up to ninety-nine links (1-99), each link containing a reference to a single pattern. Links may be inserted and deleted at will. Each link contains information that allows individual tracks to be muted or transposed, tempo can be sped up or slowed down *relative* to the Master Tempo. Individual links may be set to repeat up to 255 times. Songs as well as individual patterns may be saved to disk in Texture's own format or as Standard MIDI files.

_ **Patterns**: Up to ninety-six patterns are available (1-96) and may be from 1 to 2728 beats in length. Individual patterns may be copied, excerpted, spliced together and named as well as stored separately on disk.

_ **Tracks**: Twenty-four tracks (A-X), assignable to any of the sixteen MIDI channels, are available. Keep in mind that tracks may be blended to make room for new tracks with no degradation of sound quality. You can also designate a Linear Pattern in Link Mode which will play and record parallel to your linked patterns, effectively giving you 48 tracks when in Link Mode.

_ **Notes**: Notes may be inserted into tracks via real-time Recording, *Step Record* Mode and/or typing from within *Edit* Mode. Any kind of MIDI data can be recorded and edited with the exception of System Exclusive (SYSEX) data. Punch-in/out is available either manually or in automated form. Notes may be inserted, deleted, transposed and scaled at will. Rhythm can be corrected or *Humanized* via a variety *Quantize* options. Individual tracks may be *Blended* together repeatedly. MIDI note data and status codes may also be "*Filtered*" out and, optionally, saved to another track or discarded. Tracks can be *Copied*, *Named* and *Muted*. Cut and Paste operations are combined into single step procedures via *Block Copy* or *Block Move*. Repetitive phrases may be instantly generated using the *Fill* command. All types of MIDI data can be *Scaled* or *Clipped* including durations and the inherent tempo of a phrase.

Miscellaneous features include MIDI Sync (supporting locate to MIDI Song Position Pointer) and other hardware-dependant sync features (SMPTE, MIDI Time Code or FSK sync available), *Undo*/*Redo* last change to pattern, Event List editing, track subgrouping and monitoring commands, two *MIDI Thru* modes, *Chase Events* for intelligent start-up from anywhere in a song or pattern, *Default MIDI Program* table and *Global Edit* for performing powerful edit commands over a range of patterns.

Most Texture commands can be accessed during playback including instructions to *Loop* or *Goto* a pattern or link. This gives the user the unique ability to change the arrangement of a song as it is playing.

Finally, Texture is compatible with many IBM compatible memory resident utility programs (such as Borland's SuperKey and Sidekick) which allow the user to customize the Texture environment in extremely powerful ways.

Texture will work with either a color or monochrome monitor system.

The Texture Screen has two main "panel" windows which are referred to as the Right and Left Windows.

Below the Right and Left Windows is a display of commands currently assigned to Function keys <**F1**> through <**F10**>. These keys have different meanings depending on the current state; Pattern or Link mode. You can toggle between Pattern mode and Link Mode by pressing the <**TAB**> key on your computer (This grey key is sometimes represented by left and right arrows, one on top of the other and is usually located to the left of the "Q" key).

The Right Window contents will change frequently throughout use of the program to display different kinds of information.

_ In Pattern Mode the Right Window displays an overview of the current track names, assignments and memory usage for all tracks, combined with a graphic character representation of data for the current track.

This is called the *Multi-track Display*. Also available in this window while in Pattern Mode is a detailed display of the MIDI data stream *(Midi Data Display)* of the currently active track for viewing or editing.

_ In Link Mode, the Right Window displays information about the current Link and the Linear Pattern.

In either mode, the Right Window is also used to display disk directories *(File Browser)*.

The Left Window is divided into 2 separate panels.

The top panel contains the song title, the Clock/Timer, the amount of free memory, the Tempo and Speed settings, the current and end beats of the current Pattern, playback status information (Stop, Record, Play, Loop, Record Ready, Playback Ready) and current mute/data status of all tracks.

Directly below the **STOP / RECORD / PLAY** indicator another indicator will appear during recording. This indicator will show the number of MIDI events available or *free* in the record buffer. Since the indicator counts down incoming MIDI events, it can be clearly seen when Texture is receiving MIDI data when in Record Mode. If this indicator reaches zero, a **Record Buffer Full** message is posted, recording is disabled and your input up to that point is saved to the current track.

In the bottom half of the top panel is the Monitor/Mute display. This part of the display contains an overview of the 24 tracks and their current status. The display includes the track letter, the Monitor status for each track, and whether or not the track contains data. If a track is Muted its track letter will appear in lower case and will be a different color (with a color display). If a track is Unmuted the track letter will appear in upper case. If a track contains data, a plus sign will appear to the right of the track letter.

The bottom panel contains "setup" or Number Key Commands assigned to the number keys found at the top row of the computer's keyboard or the Numeric Keypad (with <NumLock> on).

---

## BEAT NOTATION

Tempo is expressed in *Beats Per Minute* (BPM). Beats usually represent quarter notes. A tempo of 60 BPM is equivalent to one beat per second.

In Texture beats are subdivided into 24 equal parts called Subbeats. Each subbeat is equal to one MIDI Clock. The subbeats are labeled 0 to 23.

Subbeats are further divided into Time Base Units (TBU's). At the default preset timebase of 96, there are four separate TBU's (0-3) per subbeat. Throughout the program, Beats have the following syntax:

BEAT:SUBBEAT.TBU
(e.g. 12:06.2 = 12 beats, 6/24ths and 2/TBU's)

The following would represent typical note start times, assuming a quarter note equals one beat:

| | | | | |
|---|---|---|---|---|
| 1:00.0 | 2:00.0 | 3:00.0 | 4:00.0 | Quarter Notes |
| 1:00.0 | 1:12.0 | 2:00.0 | 2:12.0 | Eighth Notes |
| 1:00.0 | 1:08.0 | 1:16.0 | 2:00.0 | Triplet Eighth Notes |
| 1:00.0 | 1:06.0 | 1:12.0 | 1:18.0 | Sixteenth Notes |
| 1:00.0 | 1:04.0 | 1:08.0 | 1:12.0 | Triplet Sixteenth Notes |
| 1:00.0 | 1:03.0 | 1:06.0 | 1:09.0 | Thirty-Second Note |
| 1:00.0 | 1:02.0 | 1:04.0 | 1:06.0 | Triplet Thirty-Second Notes |

For example, if you record an ascending C Major scale in steady sixteenth-notes, the note start-times would fall on the following beats:

| Beat | Note |
|---|---|
| 1:00.0 | C |
| 1:06.0 | D |
| 1:12.0 | E |
| 1:18.0 | F |
| 2:00.0 | G |
| 2:06.0 | A |
| 2:12.0 | B |
| 2:18.0 | C |

In the above example, Beat notation is used to describe elapsed beats measured from beat 1:00.0. Beat notation is also used to describe the duration or **END** beat of a pattern.

In Texture, you will be asked for an END either when setting pattern length or when specifying time boundaries for editing. The END is the

actual Beat:Subbeat upon which the segment to be processed terminates and the next segment would begin.

For instance: A 32 beat pattern has an END of 33:00, a pattern lasting 8 1/2 beats has an END of 9:12. You cannot set the Timebase Unit field for a pattern duration. It is always set internally to zero. Patterns are always measured in beat:subbeat increments.

## TIMEBASE SETTINGS

Generally speaking, you should never change the timebase after you've started work on a pattern or song. It can be done, but you must carefully **S**cale **T**empo on all previously recorded tracks, after which you still could run into some problems of accuracy. If you want to work with a timebase other than the default of 96 on a regular basis, we recommend creating a startup song or pattern that simply has your preferred settings ready to go and load this song whenever you're ready to start work on a new song.

The timebase you choose will affect resolution, quantize ability and on some machines, performance.

The greater the timebase, the greater the resolution: At 192, there can be 192 discrete parts to a beat and at 48, only 48. This means that when you record (with quantize off) a higher timebase will preserve more of your original feel, whereas the lower timebase will tend to be a bit choppier. Many people find that the default 96 gives them all the resolution they need while others notice a distinct improvement at 192. There is also a relationship to tempo: At higher tempos, a timebase of 96 is probably more than adequate.

Quantize Divisor settings are limited to numbers that will divide evenly into the current timebase.

This means that if you want to be able to quantize at 5 parts to the beat (a fairly unusual request), you would want to use 120 as your timebase.

If you're running on a relatively slow machine (original PC or XT compatible) we recommend sticking with 96 as your timebase as the overhead rises with the timebase and you may actually get smoother performance at 96 than at 192 (depending on the density of your MIDI data).

There are many instances in Texture when you will be asked to enter beat information in response to a particular command. When entering beat information, you may either type a colon <**:**> or use <**SPACE**> to separate the beat number from the subbeat number or the subbeat from the TBU. You may enter the minimum beat information needed to specify the given event at the proper precision. For example, if you wish to work on a note at beat 12:00.0, you need only type `12` <**ENTER**> to specify that beat. Likewise, to specify 12:23.0 you can type `12:23` <**ENTER**> or `12 23` <**ENTER**>.

# CHAPTER 3
# A QUICK TUTORIAL

Sequencing 1
Exercise 1
First Steps
Hardware Setup 2
Texture Setup 2
Video Display 3
The Texture Environment 3
Record 4
Play 4
Save Your Work 4
Exercise 2
Track Names, Pattern Length & Basic Settings
Naming A Track 5
Loop & Pattern Length 5
Undo 6
Count, Metro & Tempo 7
MIDI Thru 7
Exercise 3
Multi-Track Patterns & Pattern-based
Sequencing
Multiple Tracks 8
Multiple Patterns 9
Link Mode 9
Exit Texture 10

*This tutorial takes you through a quick session of sequencing using Texture 4. We are keeping it simple and to the point so that you can grasp the basics in a short time.*

---

## SEQUENCING

Texture is a MIDI (Musical Instrument Digital Interface) *sequencer*. In its simplest form, a sequencer is like a tape recorder for MIDI data, the biggest difference being that MIDI data bares little resemblance to sound, which is what a tape recorder records.

This is how you work with a sequencer in its most primitive form:

_ Put the sequencer into record mode

_ Play something on a MIDI equipped keyboard and the sequencer will record your actions.

_ Put the sequencer into play mode and **it** plays what you played on the keyboard. It does this via the cable which connects the sequencer's MIDI output to the keyboard's MIDI input.

By playing the keyboard while the sequencer was "listening", you taught it how to play whatever it was you played.

The following exercises will demonstrate the basics of sequencing using Texture. We don't recommend skipping over any of these exercises as each exercise builds on work done in the previous exercise. In each case, it is assumed that Texture is in the state the previous exercise left it in.

*First Steps*

## HARDWARE SETUP

MIDI setups can range from being extremely simple to amazingly complex. For the first exercise in this tutorial, the very simplest setup will do fine. You must have one MIDI keyboard, a computer with a Texture supported MIDI interface, two MIDI cables and a way to monitor the keyboard's audio output.

*Note: Using a true Roland MPU-401, MPU-IPC or Yamaha C1 Computer, you are provided with an audible metronome beep when the metronome is on in Texture. With most MPU-401 "clone" interfaces, the metronome must either be plugged in to your audio equipment or you need to set up a MIDI metronome following the manufacturer's instructions.*

Connect one MIDI cable from the keyboard's MIDI out to the computer's MIDI in. This cable allows the computer to receive MIDI data being transmitted by the keyboard. Connect another MIDI cable from the computer's MIDI out to the keyboard's MIDI in. This allows the keyboard to receive MIDI data being transmitted by the computer. You now have established two-way communication between the computer and the keyboard.

For the purposes of this exercise, your keyboard should be in Omni Off/Poly mode and, if so equipped, should have Multi-Mode off (see manufacturer's instructions).

## TEXTURE SETUP

If you haven't already done so, install Texture to a floppy or hard disk by placing the appropriate Texture distribution disk (5.25" or 3.5", depending on the size of your "A:" drive) into the "A:" drive of your computer and typing `SETUP` <**ENTER**> (the <**ENTER**> key may be labeled <**RETURN**> on your computer).

Follow the on-screen instructions to install Texture.

To load Texture, log on to the drive/directory where it is installed and type the appropriate command:

_ MPU-401 or Compatible interface: `TXR` <**ENTER**>

_ For a non-default interrupt (IRQ) add **/i:***n* where *n* is the interrupt #.
(e.g. `TXR /i:5` <**ENTER**> or `TXDEMO /i:3` <**ENTER**>)

_ Yamaha C1: `TXC` <**ENTER**>

*Note: If you've previously installed Texture, keep in mind that this tutorial assumes that you've just loaded Texture. If this isn't the case, we suggest that you exit* <***CTRL-X***> *Texture and re-load the program now.*

The first thing you'll see when you load Texture is the version number and copyright notice window. Hit any key on your computer to continue.

## VIDEO DISPLAY

Texture has several *display modes* and two *playback modes*. What you're looking at now is the **Multi-Track Display** in **Pattern Mode**. We will start by ignoring most of what is seen on the screen and instead concentrate on the "primitive" sequencer functions described above: Record and Play.

## THE TEXTURE ENVIRONMENT

We will refer to the Texture Display as having an Upper Left, Lower Left and Right Window for purposes of verbally *pointing* to things on your computer display. The Upper Left Window is the area that contains the labels: **MEMORY**, **TEMPO**, **BEAT**, **SPEED**, **END**, etc.. The Lower Left Window contains **Quantize**, **AutoPunch**, **Metro**, etc.. The Right Window (in the current mode) contains the two vertical lists of tracks (A - X) and the **Scrolling Data Display** (includes the labels: **ntf**, **ntn**, **pkp**, **ctl**, etc.).

In its default state, Texture is set up with a 4 beat count-off and one metronome beep per beat at a tempo of 120 beats per minute. The current pattern is Pattern 1 and the current track is Track A. When you give Texture the command to start recording, the metronome will count 4 beats before the pattern starts. When the pattern starts, Texture will record the

MIDI data sent by your keyboard until you tell it to stop or the pattern ends. The default pattern length is 999 beats, with an *End* beat of 1000.

Before recording anything, get a feel for the current tempo by pressing <**P**> for **P**lay. You should here the metronome beeping or ticking (depending on your MIDI hardware) once per beat. The first four beats are a count-off and you'll see the word **Count....** replacing **STOP** in the upper left window (we will refer to this display "slot" as the Play/Record indicator). This changes to the word **PLAY** when the 4 count beats have passed. Press the <**SPACE**> bar on your computer to stop playback. The Play/Record indicator changes back to **STOP**.

## RECORD

To record a MIDI phrase, press <**R**> for **R**ecord once. The Play/Record indicator in the upper left window changes to **RecReady** showing that Texture is now ready to record. When you press <**R**> a second time, Texture counts off 4 beats, then begins recording and continues until you hit <**SPACE**> or the pattern ends. For this exercise, record a short phrase, then hit <**SPACE**> to stop. Here is a review of the record process for this exercise:

_ Hit <**R**> once to enter **RecReady** mode.

_ Hit <**R**> again to start the Play/Record engine.

_ After the 4 count beats have passed, play a phrase on the MIDI keyboard.

_ Hit <**SPACE**> to stop the Play/Record engine.

Assuming you've followed the above procedure, you should now see the following changes in the Texture display: In the upper left window the beat indicator (to the right of the word **BEAT**) shows the **beat:sub-beat** where the Play/Record engine was stopped. The Play/Record indicator should again read **STOP**. In the right window, a number to the right of **A1_*** shows the number of bytes occupied by the newly initialized Track **A**.

## PLAY

To playback what you've just recorded, press <**P**> for **P**lay. After the 4 beat count, you should hear what you recorded. Hit <**SPACE**> at any time to stop playback.

## SAVE YOUR WORK

It is important to save your work to disk often and there are several file management commands available (hit <**F**> for **F**ile to see this menu). The easiest way to save your work is to save it as a song. A song includes all patterns containing any data, even if they haven't been linked using Link Mode. The first time you save a song you should use <**F**>iles <**S**>ave <**S**>ong. You are then prompted to enter a file name for the song. Type in a name up to 8 characters long and hit <**ENTER**>. Texture will add the file extension **.SNG** to the name you supply. Subsequently you can type <**F**>ile <**Q**>uikSave to update the file as you make further changes to the pattern or song.

---

## EXERCISE 2

*Track Names, Pattern Length & Basic Settings*

This exercise will familiarize you with some simple Texture features.

## NAMING A TRACK

In most cases, you will want to develop an approach to track layout which compliments your particular MIDI setup. Since we are starting out with a very simple approach (one keyboard only) this is not a big issue right now. Just the same, we will go through the motions of naming a track. Track names can be up to 13 characters long, so select a concise name which describes the type of part you recorded on Track A.

To name the track, press <**N**> for **N**ame, <**T**> for **T**rack and proceed to type in the name you've chosen for Track A, followed by <**ENTER**>. The name you typed in will appear in the Track A slot of the Right Window. It will also appear between the Upper and Lower left windows as long as Track A remains *current*.

## LOOP AND PATTERN LENGTH

When **Loop** is toggled on, the current pattern will reset to beat **1:00** when the **End** beat is reached and continue playing without hesitation. Since Pattern 1 is set to the default duration of 999 beats, it would take some patience to experience the effect of Loop.

What follows is one way that you can determine the proper duration for a particular pattern. In many cases you would decide ahead of time how long each pattern should be in terms of bars or beats. However, we're making no assumptions in this tutorial with regard to your personal approach to music.

Assuming you followed instructions and recorded a "short phrase" into Track A, **P**lay Pattern 1 now and hit <**SPACE**> to stop playback at a spot where you feel it would be appropriate to loop the pattern (i.e. wrap around to the beginning).

_ The Beat indicator should now show the beat and sub-beat where you stopped playback. Sub-beats represent 24ths of a beat.

Press <**F1**> to **Dimension** the current pattern (notice the function key display at the bottom of your screen). A small window will appear at the bottom left of the Texture display with the title **DIMENSION Pattern Boundaries**. This command allows you to redefine the pattern start and end points. Accept the default **New Begin** beat of **1:00** by hitting <**ENTER**>. Now, round off the number shown by the Beat indicator in the Upper Left window to the nearest beat. For example, if the Beat indicator reads **9:03**, meaning "3 sub-beats past beat 9", then **9** is the rounded number. If the Beat indicator reads **16:21**, meaning "21 sub-beats past beat 16", then **17** would be the rounded number. In response to the **End** prompt, type the beat number followed by <**ENTER**>.

The new pattern end beat is reflected in the **END** indicator to the right of the **BEAT** indicator. The new pattern duration is reflected to the far right of the label **Pattern 1** along the top border of the Right Window. (The pattern duration will always be equal to one beat less than the pattern end beat).

**P**lay the current pattern.

| |
|---|
| Texture will automatically stop playback when the End Beat is reached. |

Press <**L**> for **L**oop. The **LOOP** indicator will appear to the right of the Play/Record indicator (which is currently displaying the word **STOP**) in the Upper Left Window.

Hit **P**lay again and wait for the pattern to wrap around when it reaches the End Beat. After it wraps around, hit **L**oop to turn Loop off. Playback will stop when the End Beat is reached.

> Notice that the count-off is omitted on all but the first iteration of the pattern when Loop is on.

## UNDO

If you're not happy with the new End Beat, you can take this opportunity to familiarize yourself with the **U**ndo feature. In a nutshell, Undo will replace the last pattern you made a change to with a copy of the pattern as it existed before the change was made. This means that you can revert to the way things were before you used <**F1**> to dimension Pattern 1. You will then be able to use the Dimension command again, this time selecting a different End Beat. You can repeat this process until you're happy with the results. (You could continue to use the Dimension command without using Undo, but your MIDI data would not be restored once it has been "chopped" by Dimension.)

To access Undo, Press <**U**> for **U**ndo. You are prompted: **UNDO Last Change to Pattern 1?**. Hit <**Y**> for **Y**es and you've reversed your previous action.

> If you hit **U**ndo a second time you can undo the undo (referred to as ***redo***).

## COUNT, METRO AND TEMPO

To reset the amount of count-off beats used, press <**4**> (notice the number 4 to the left of the word **Count** in the Lower Left Window). You will see the prompt **Count Off Duration (0 - 9)** at the bottom left of your screen. This prompt is asking you to press a number 0 through 9. If you press <**0**>, the count off will be turned off. Any other number will set the number of count beats. Pressing <**ESC**> would abort the operation and the count off would remain as it was. Press <**0**> to turn it off for now.

The metronome is set in a similar manner. Hit <**3**> to be prompted **Metro Beeps per Beat (0, 1, 2, 3, 4, 6)**. Press <**0**> to turn off the metronome for now.

Turn **L**oop on and **P**lay the pattern. While the pattern is playing, hit <**T**> for **T**empo. At the prompt **Master Song Tempo**, type **200** followed by <**ENTER**>. You should immediately hear and see the difference of changing from 120 Beats Per Minute (BPM) to 200 BPM. Try this again, this time entering **75** as the new tempo. Now, set it back to the original tempo of **120**.

Without stopping playback, set the metronome <**3**> back to 1 beep and the count <**4**> back to 4. Now stop playback by hitting <**SPACE**> and turn **L**oop off.

## MIDI THRU

If you have a multi-keyboard or multi-sound module setup, you will probably want to use one of your keyboards as a *controller* keyboard. This means that you will play parts on remote sound modules or keyboards from the controller keyboard. The usual MIDI routing for such a setup is to connect the MIDI Out from the controller into the MIDI In of the computer. The MIDI Out from the computer is then either plugged in to a MIDI Thru box or daisy-chained to the various remote keyboards and/or modules. MIDI Thru is used to allow the controller keyboard to play the remote devices while passing the MIDI data through the computer (so it can record it).

There are various ways to use MIDI Thru. For now, if you have a single keyboard setup, turn MIDI Thru off (<**6**> followed by <**O**> for **O**ff). Otherwise, leave it on.

The above exercise has given you a basic feel for how things are done in Texture. Most functions can be performed while playing or recording a pattern or song. There are well over a hundred such functions available through key commands and sub-menus in Texture. You can view them by pressing <**H**> for **H**elp and using the cursor keys to scroll through the Texture Help utility.

This manual goes into great detail regarding how to use each and every command in Texture; It is worth reading carefully if you plan to use Texture 4 on a regular basis.

*Multi-Track Patterns & Pattern-Based Sequencing*

In Texture, a song is created by stringing a series of patterns together through the use of *Links*. There is little restriction regarding the length of patterns. The way a song is structured is totally in your hands.

A pattern represents a piece of a song and can be almost any length. The minimum pattern duration is 1 beat and the maximum 2728 beats (that's more than 22 minutes at 120 BPM). Pattern durations can be resolved to as little as a 24th of a beat. Each pattern contains 24 tracks (A - Z). Each track can contain a maximum of 8190 MIDI events which can be sent to any of the 16 MIDI channels. Tracks can be assigned to discreet MIDI output ports depending on which MIDI interface or computer you are using.

## MULTIPLE TRACKS

In the above examples, you recorded a phrase to Track A of Pattern 1 and dimensioned the pattern to comfortably "house" that phrase.

Use the down arrow <_> on your computer keyboard to move to Track B (note that the hibar in the Right Window has moved to Track B). **P**lay the pattern and while listening to the phrase you recorded on Track A, come up with something suitable to *overdub* onto Track B. When you're ready, Press <**R**> twice to once again enter Record Mode and record the second part. If you're not happy with a part, you can simply record over it. You may also use **U**ndo to take you back one step at any time.

If you have a multiple keyboard setup or have a keyboard or sound module which can be set to Multi-Mode, you have the choice of adjusting the MIDI output channel on your controller keyboard before recording the track or using Texture's **A**ssign **C**hannel command to force a track's MIDI routing to a particular channel.

## MULTIPLE PATTERNS

Before starting to work with multiple patterns, use the **N**ame command to give Pattern 1 a name of your own choice. Press <**N**> for **N**ame, <**P**> for **P**attern, type in the name and hit <**ENTER**>.

Hit the <+> key on the numeric keypad of your computer. You just selected Pattern 2 to be the current pattern (hitting the <-> key will bring you back to Pattern 1). There are 96 patterns available in Texture. You may have noticed that any track names and assignments applied in Pattern 1 are still in affect in Pattern 2. This is because all patterns share a common set of track names and assignments. The benefits of this system will become more apparent when you learn about track subgroups, muting and monitor issues.

At this time, record at least one track in Pattern 2 using the same procedures used for Pattern 1. Remember to Dimension Pattern 2 in a similar manner to Pattern 1 before moving on. When you've done this, **N**ame **P**attern 2.

## LINK MODE

The <**TAB**> key will toggle back and forth between Link and Pattern modes. Hit <**TAB**> now to enter Link Mode.

As you can see, the Right Window has changed significantly. Also note that the function keys at the bottom of the screen have also changed to represent a different set of functions available in Link Mode.

| |
|---|
| Texture requires that you set a *Last Link* value before using Link Mode. |

Press function key <**F8**> (Last) to do this now. You are prompted: **Set Last Link of Song**. This value can be changed at any time, the range is 1 - 99. Respond by typing **5** <**ENTER**>.

You are about to assign the two patterns you created to Texture links in order to form a song. Use the <**F1**> key to access the **ASSIGN Pattern to Link** window. At the bottom left of your screen, this window will pop up, showing several options. For now, the only ones you should be concerned with are the <**LEFT**> and <**RIGHT**> arrow keys, which you will use to select a pattern in each link, and the <+> and <-> keys, which you will use to change links.

The following link assignments are totally arbitrary but will help demonstrate the way you assign patterns to links. Here's what we'll end up with:

| |
|---|
| Link 1 - Pattern 1 |
| Link 2 - Pattern 2 |
| Link 3 - Pattern 1 |
| Link 4 - Pattern 1 |
| Link 5 - Pattern 2 |

To bring this about, do the following: The default is Pattern 1 so Link 1 already contains this assignment. Move to link 2 by pressing the <+> key once. You are now in Link 2. Press the <**RIGHT**> arrow key once to select Pattern 2 for this link. The next two links are also already set to Pattern 1 by default, so press the <+> key three times to move to Link 5. Once again, use the <**RIGHT**> arrow key to select Pattern 2 for Link 5.

Press <**ENTER**> to close the Assign window. Now hold down the <**CTRL**> key and press <**HOME**> to reset Texture to Link 1 (an alternate way would be to type <**G**>oto <**L**>ink **1** <**ENTER**>).

The **P**lay command is used in the same way in Link Mode as it is in Pattern mode. Hit <**P**> for **P**lay now and listen and watch as Texture plays patterns 1,2,1,1,2.

## EXIT TEXTURE

To exit Texture, hold down the <**CTRL**> key and press <**X**>. You will be prompted: **S**ave / **A**bandon **/ <ESC> to Cancel**. If you have not yet saved your work you may wish to do so now. By choosing <**S**> for **S**ave you will exit Texture with the current song having been saved under its current file name. If you've already saved the current version of your work you may press <**A**> for **A**bandon to exit Texture. If you're not ready to leave Texture yet press <**ESC**>.

This ends the tutorial exercises. We've barely scratched the surface of Texture's abilities. The following chapters will expand on everything covered here and introduce a host of features that haven't been mentioned.

# CHAPTER 4

# SCREEN DISPLAY AND USER INTERFACE


¯ Overview 1
¯ Video Display <**CTRL-V**> 1
¯ Help <**H**> 2
¯ Escape <**ESC**> 3
¯ Goto <**G**> 3
¯ <**TAB**> (Pattern/Link Mode Toggle) 5
¯ Name <**N**> 6
¯ Multi-Track Display 8
¯ Scrolling Track Data Display 9
¯ Outline <**O**> 10
¯ View <**V**> (Pattern Mode) 11
¯ Midi Data Display 12
¯ Time Field 13
¯ Data Fields 13
¯ Channel & Type Fields 16
¯ Note Display <**CTRL-N**> 16
¯ Track Map Selection Keys 17
¯ Line Editor 18
¯ Version Display <**ALT-V**> 20

# SCREEN DISPLAY AND USER INTERFACE

*A good understanding of this chapter is an essential part of optimizing the time you spend using Texture. We start with some very simple commands. Next, the various modes and views are described in detail. Important discussions about the MIDI Data Display and Track Map Selection keys are included near the end of this chapter. These contain extremely useful information that you may wish to "breeze over" on first reading and return to later when you've had a chance to work with some other aspects of the program.*

---

## HELP <H>

*Definition:*

The **H**elp Menu is a display of all Texture commands. To access this list, press <**H**> (not available when in the middle of a command or sub-command). Either the file TXHELP.EXE must be in the current disk directory or you must have the DOS Environment Variable TXHELP set to the path where TXHELP.EXE can be found. For instance, if you keep the file TXHELP.EXE in the directory **c:\texture**, place this statement in your AUTOEXEC.BAT file: `set txhelp=c:\texture`. For more information on this, see the section entitled **DOS Environment Variables** in the chapter **File Management And Dos**. Once the help window is displayed on the screen, you may use the cursor keys to page through the document. Top level commands are shown starting near the left margin while sub-commands are indented. The list starts with Alpha Key Commands, then shows miscellaneous, <CTRL>, Number and Function Key Commands. The list ends with Command Line Switches and DOS Environment Variables. Hit <**ESC**> when you are done.

*At A Glance:*

**H**elp
    TEXTURE Help Utility
    Use Cursor Keys to Scan Help File / <ESC> to Quit

*See:* Appendix: Help Listing

## ESCAPE <ESC>

*Definition:*

The <**ESC**> key is used throughout Texture to abort command sequences.

*At A Glance:*

<**ESC**> (Escape Key)

*Example:*

You may hit the <**ESC**> key within program commands when you wish to exit a command prematurely. No changes to data will be made. For example, when in Edit (<**F10**> in Pattern Mode), <**ESC**> allows you to leave Edit and lose all changes. Hitting <**ESC**> during playback will stop playback.

*Note: To exit Texture and return to DOS, type <CTRL-X> to invoke the program exit command.*

*See:* Undo, Exit

## GOTO <G>

*Definition:*

The **G**oto command is used to move rapidly to a specific pattern or link. Also used to set a start beat other than beat 1:00 for playback and record functions. Goto is an Alpha Key Command, and may be accessed in either Pattern or Link modes by hitting <**G**>.

*At A Glance:*

```
Goto
   GOTO Pattern /  Link /  Beat
   Enter Letter >
      Pattern
         GOTO Pattern # Enter Value >
      Link
         GOTO Link # Enter Value >
      Beat
         GOTO Beat # Enter Value
         Start At: (Current Setting)
         Enter Value >
```

*Example (Pattern):*

To move from one pattern to another in Pattern Mode, or from Link Mode to a particular pattern (automatically switching to Pattern Mode), type <**G**> to invoke the **G**oto command. You will be prompted: **GOTO P**attern / **L**ink / **B**eat. Press **P**attern. Next, type the number of the destination pattern (1 - 96) and <**ENTER**>.

*Example (Link):*

To move to a particular link, either form Pattern or Link Modes, press **G**oto, **L**ink, the destination Link number (1 - 99) and <**ENTER**>.

*Example (Beat):*

To start on a particular beat within a pattern (in Pattern or Link modes) hit **G**oto **B**eat. You will be prompted with **Start At:** *xxx* **Enter Value >**. The number currently displayed next to the words **Start At** will default to the current setting. Type in the new value and hit <**ENTER**>. The current pattern or link will now begin at the beat selected.

*Comments:*

When you **G**oto a **B**eat, the new value entered becomes the start beat of the current pattern, and will be displayed in the BEAT window (upper Left Window). The MIDI Data Display will display data starting at the start beat (toggled via **V**iew in Pattern Mode). This is handy for quickly moving to target beats for viewing in the MIDI Data Display. When in

Pattern Mode, all **P**lay and **R**ecord functions will start from the start beat. When looping, the loop always starts at the current start beat. You will find this extremely useful when working with long Patterns.

Texture has several other ways to move to, or set a new start beat. A new start beat may be set by hitting <**ENTER**> during **P**lay or **R**ecord. The <**RIGHT**> and <**LEFT**> arrow keys will move you to the next beat (forward or backward). The start beat is always reset when you position to another pattern in Pattern Mode, or stop playback in Link Mode.

In addition to **G**oto, you may move to new patterns or links in single increments by using the <+> or <-> keys.

To reset to the beginning of the pattern type **G**oto **B**eat **1** <**ENTER**> or hit <**HOME**> if **V**iewing the Multi-Track Display.

*Moving From One Track to Another:*

You do not move to different tracks via the **G**oto command.

To move sequentially from one track to another, use the unshifted left angle bracket (comma) and right angle bracket (period) keys (< and >). You may quickly move to a specific track by hitting the semi-colon key (**;**). You will see the prompt **Select Current Track (A - X)**. Hit the track letter you wish to position to now. In other words, to move to Track X from any track, press <**;**><**x**>.

*See:* <CTRL-HOME>, Stop/Continue, Texture Fundamentals

---

## <TAB> (PATTERN/LINK MODE TOGGLE)

*Definition:*

The <**TAB**> key toggles between Pattern and Link Modes. The Right Window displays information relevant to the current Mode.

*At A Glance:*

<**TAB**> Key
Toggles between Pattern and Link Mode
Move to Linear Pattern in Pattern Mode from Link Mode

*Example:*

Unless you load a file using a command line argument (e.g. `TX BRAND3` <**ENTER**>) when loading Texture, you will be in Pattern Mode when you first enter Texture. To move to Link mode, hit the <**TAB**> key on your computer keyboard. The current Link will be displayed in the Right Window, and the Link Mode Function Keys will appear at the bottom of the screen. To go back to Pattern Mode, hit the <**TAB**> key once more.

*Comments:*

You can also use the **G**oto **P**attern / **L**ink command to force Pattern or Link mode respectively (as opposed to the toggle action <**TAB**> provides) while instructing Texture which Link or Pattern to make current.

If you have a Linear Pattern assigned and you are in Link Mode, the <**TAB**> key will toggle to Pattern mode and make the Linear Pattern current.

*See:* Goto

---

**NAME <N>**

*Definition:*

Use the **N**ame command to lable the current track or pattern. An Alpha Key Command accessed by pressing <**N**>, Names may be up to 13 characters long. The current Names are displayed in the Multi-Track Display (Pattern Mode).

*At A Glance:*

**N**ame
  Name: **P**attern / **T**rack
  Enter Letter >
    Pattern Name *(Current Name)*
    Track Name *(Current Name)*

*Example (Name Pattern):*

Press <**N**> to invoke **N**ame. Select <**P**> to **N**ame a **P**attern. At the **Pattern Name** prompt type any 13 character word (use <BACKSPACE> or <DEL> to correct typing errors) and press <**ENTER**>.

*Example (Erase a Name):*

To erase a **N**ame, first **G**oto the appropriate pattern or track, Press <**N**>, choose **T**rack or **P**attern, hit <**SPACE**> and then <**ENTER**>.

*Comments:*

> *Note: A track keeps its name throughout an entire Song, i.e., if you switch patterns, you will still have the same set of track names.*

The **D**efault command which sets the default pattern length for Inactive Patterns will not affect an empty pattern if it has been **N**amed.

Patterns that are empty of data will still be **S**aved to disk as part of a Song File if they have been **N**amed (or if the pattern number appears in the list of links). Pattern names can be used as DOS filenames and Texture automates this process for you, suggesting the underscore character (_) in place of spaces or other characters illegal under the long arm of DOS. While pattern names can be 13 characters long, only the first 8 will be used in the filename.

*See:* Line Editor, Zap Track Names

---

## MULTI-TRACK DISPLAY

*Definition:*

The Multi-Track display is located in the Right Window and available in Pattern Mode only. This display lists the track letter (A-X), port assignment, mute/monitor status, channel assignment, the track name (if any), and size (in bytes) of each of the 24 Tracks. The currently active track is highlighted with a hibar.

The track letter of a muted track is shown in lower case and a monitored (unmuted) track is displayed in upper case. The muted tracks are a dull grey color when shown on a color display. A monitored track will have a *dot* between its port and channel assignment, and a muted track will have a *space* between the port and channel.

Monitored track display:

```
E1_5  Rhodes 1     476
```

Muted track display:

```
e1 5  Rhodes 1     476
```

Use the < and > keys (unshifted is fine) or the <**UP**> and <**DOWN**> arrow keys to move from track to track. For quick track location, use the <**;**> (semi-colon) key. This brings up the **Select Current Track (A-X)** prompt. Follow this with any track letter (a - x) and you're there. In other words, two keystrokes <**;**> <**w**> are all that are needed to get to any specific track.

The **V**iew Alpha Key Command toggles between the MIDI Data Display and the Multi-Track Display.

**INSERT GRAPHIC HERE**

*See:* Assign, MIDI Data Display, Name, Right Window

## SCROLLING TRACK DATA DISPLAY

*Definition:*

In Pattern Mode, this display is located directly below the Multi-Track Display in the Right Window. The Scrolling Track Data Display is a grid which indicates where data lies within the current track and scrolls along to keep up with the track as it plays. Data is divided and color-coded (on color monitors) by event status. The scrolling display may be toggled off\on if it is not needed with the <\> (backslash) key. By doing so you can eliminate the added overhead involved in reading the current track and constantly re-drawing the display. This can cause the program to react slowly if patterns are long and dense on slower speed computers.

*At A Glance:*

When In Pattern Mode:
Scrolling Track Data Display
*Beat markers across the top*
*Event Status listed along the left side*
*Data is represented by blocks on the grid to the right of the Status list*
<\> Toggle Display Off/On

*Example:*

You may lock out the Scrolling Track Data Display with the <\> (backslash) key. Users of slower speed computers may opt to do this if they are working on a song with very long patterns with dense tracks. In this type of situation the performance of the program may bog down due to the excessive overhead involved in constantly scanning all the tracks and redrawing the screen display.

*Note: If the display has been locked and you reposition to a track which contains no MIDI data, unlocking the display will not seem to have any affect until you position to a track which contains MIDI data.*

---

## OUTLINE <O>

*Definition:*

The **O**utline command enables an overview of patterns and links to be displayed in a pop up window. **O**utline is an Alpha Key Command.

*At A Glance:*

**O**utline
OUTLINE: **L**inks / **P**atterns Enter Letter >
PATTERNS *(Outline Window, Lower left)*
LINKS *(Outline Window, Lower left)*

*Example:*

To see a list of current patterns in use, press <**O**> to invoke **O**utline, then <**P**> to choose **P**atterns. You will now see, in the Right Window, a listing of patterns with their names and end beats. Pressing <**SPACE**> will display more patterns and <**ESC**> will stop the listing. The display will wrap around to the beginning and repeat after displaying a horizontal separator bar between the last item and the first.

*Comments:*

**O**utline provides a quick overview of all active patterns or links. Any patterns missing from the list aren't currently in use and contain no data.

*Note: The **O**utline **P**attern and **L**inks command displays a pattern's durations as opposed to its* **End** *beat. This is to allow for easier adding up of pattern lengths to calculate total Song length etc. This and the top bar (Right Window, Pattern Mode) are the only places actual Durations are displayed. All other representations are of End Beat.*

*See:* Link, Pattern

## VIEW <V> (PATTERN MODE)

*Definition:*

**V**iew toggles between the Multi-Track Display and the MIDI Data Display in the Right Window when in Pattern mode. Use **V**iew (the <**V**> key) to change displays. The default mode is the Multi-Track Display.

*At A Glance:*

When in Pattern Mode:
**V**iew
Toggles between the Multi Track Display or MIDI Data Display.

*See:* Edit <F10>, MIDI Data Display

## MIDI DATA DISPLAY

*Definition:*

Accessed via <**F10**> Edit or **V**iew in Pattern Mode, the MIDI Data recorded on the current track is displayed in the Right Window. The **V**iew command toggles between the Multi-Track and MIDI Data Displays. <**F10**> Edit will invoke the MIDI Data Display as well as the MIDI EVENT EDITOR at the bottom left of your screen. The MIDI Data Display shows the timing and event data for all *Channel Voice Messages*. These include note-on, note-off, polyphonic key pressure, continuos controller, program change, after touch and pitch wheel events. You can directly edit the data displayed here using the <**F10**> (Edit) command or by using the various Clipboard functions (see **Edit** and **Clipboard**).

You may use the cursor keys to move around in the Track in either **V**iew or **Edit**. If **S**ound is enabled (see **Edit**) you will here notes when you position over them.

*At A Glance:*

When in Pattern Mode:
**V**iew or <**F10**> Edit
MIDI Data Display *(Special Symbols):*
_ _ (Wedges) Current Event Data Pointer (Cursor)
·· (Ditto) Same Channel or as Above
_ Event is tagged for Clipboard Editing (View Mode)
* MIDI data altered or inserted via Edit (Edit Mode)

*Comments:*

The MIDI Data Display lets you look at the "fine print" details of a track. It is organized into five different columnar areas called Fields. The five Fields consist of the **Time** field, two **Data** fields, the MIDI **Channel** field and the **Type** field.

| | Time | Data 1 | Data 2 | Channel | Type |
|---|---|---|---|---|---|
| note-on | bb:ss.tbu | Pitch | Velocity | 1-16 | ntn |
| note-off | bb:ss.tbu | Pitch | OffVel | 1-16 | ntf |
| note-on | bb:ss.tbu | Pitch | Velocity | 1-16 | ntn |
| note-off | bb:ss.tbu | Pitch | 0 | 1-16 | ntn |
| program | bb:ss.tbu | Pgm# | | 1-16 | pgm |
| pitch | bb:ss.tbu | LSB | MSB | 1-16 | pwl |
| control | bb:ss.tbu | Ctrlr# | Amount | 1-16 | ctl |
| poly key | bb:ss.tbu | Note# | Amount | 1-16 | pkp |
| after | bb:ss.tbu | Amount | | 1-16 | aft |

**TIME FIELD**

The **Time** field tells you on what beat, subbeat and timebase unit a given event occurs. A beat consists of twenty-four subbeats (labeled 0-23). Each subbeat is equal to one MIDI clock. Each MIDI clock is further divided by Timebase Units. For Timebase=96, there are 4 Timebase Units per MIDI Clock. For Timebase=120, there are 5 Timebase Units per MIDI Clock. (See discussion of **Beat Notation** in **Texture Fundamentals** for more details). The data to the right of the Time field occurs on that Beat:Subbeat.Timebase Unit.

## DATA FIELDS

The two **Data** fields display different types of information based on the **Type** of MIDI event.

*Note-on/Note-off:*

_ Note-on events are displayed in uppercase, backlit characters.

_ Note-off events are displayed in lowercase characters.

In the case of note-on and note-off events, the **Data 1** field displays the note's pitch in one of two ways (see **Note Display** <**CTRL-N**>). When displayed as Note values, the range is from C0 (note = C, octave = 0) to G10 (note = G, octave = 10). When displayed as key numbers, the range is 0 - 127.

In the case of an event of type note-on, the **Data 2** field represents note-on velocity (how hard you hit the note). This field has a special meaning if its value is zero. Under MIDI, if an event is of the type note-on but has a velocity of zero, it is interpreted as a note-off. This enables MIDI traffic to be much more efficient in cases where you have a lot of adjacent note data and the device is transmitting using a technique called *Running Status*. (A complete discussion of Running Status is beyond the scope of this manual, but many books and articles about MIDI will explain this in full detail.)

_ The above is only of interest if you are curious about the fact that in some instances the Data Display will show a lowercase event of type **ntn**. Notice that these events always show a velocity (data 2) of zero, and are, in effect, note-offs.

When an event is of the type note-off (**ntf**), the **data 2** value refers to note-off velocity (sometimes called *release velocity*). This refers to the speed at which you removed pressure from the keyboard note. Only certain keyboards support this option and only certain sequencers support this option - Texture is one of them.

*Polyphonic Key Pressure:*

Polyphonic Key Pressure events (**pkp**) use **Data 1** to store the key number and **Data 2** to store the amount of pressure.

*Continuous Controller:*

Controller events (**ctl**) use **Data 1** to store the type of controller (e.g. **1** = Modulation, **7** = Volume) and **Data 2** to store the amount applied.

| |
|---|
| Controller Data 1 values can range from 0 - 120. |

Some of these are common among most MIDI devices and some will vary between manufacturers. Numbers from 0 to 63 are reserved for continuous controller devices. Ctl numbers 64-95 are for switch-type controllers such as a Sustain Pedal (which is usually assigned to ctl 64). Because of their On/Off nature, these controllers can only accept one of two numbers in the second Data Field, either a 0 for OFF or 127 for ON. All other numbers are usually ignored.

Here are some of the most common controllers:

| | | |
|---|---|---|
| 1 | = | Modulation (Mod Wheel) |
| 2 | = | Breath |
| 4 | = | Foot |
| 5 | = | Portamento |
| 7 | = | Volume |
| 10 | = | Stereo Pan |
| 64 | = | Sustain (Damper) Pedal |

*Channel Mode Messages:*

Ctl numbers 121-127 are reserved for Channel Mode messages. They are defined as follows:

| ctl# | DESCRIPTION |
|---|---|
| 121 | Reset All Controllers |
| 122 | Local Control On/Off |
| 123 | All Notes Off |
| 124 | Omni Mode Off |
| 125 | Omni Mode On |
| 126 | Mono Mode On (Poly Off) |
| 127 | Poly Mode On (Mono Off) |

Consult your synth's manual and MIDI implementation chart to see which controllers each of your MIDI devices supports.

*Program Changes:*

Program Change events (**pgm**) use **Data 1** only and it contains the program number. When you position over a Program Change event, the program will be transmitted via MIDI if you have turned the **Program Change Send** option on in the Edit Menu (see **Edit** <**F10**> in the **Editing MIDI Data** Chapter). The default is off.

*After Touch:*

After Touch events (**aft**) also use **Data 1** only and it contains the amount of pressure applied.

*Pitch Wheel:*

Pitch Wheel events (**pwl**) use **Data 1** to store what programers call the *Least Significant Byte* (LSB) and **Data 2** to store the *Most Significant Byte* (MSB) of pitch wheel data (don't ask, suffice it to say that different keyboards transmit different amounts of resolution and some use only the **Data 2** Field).

All Data 1 and Data 2 Field values are in the range of 0 to 127.

## CHANNEL AND TYPE FIELDS

The **Channel** field shows the individual channel assignment for each event and the **Type** field shows the type (sometimes referred to as *Status Code*) of each event.

Texture uses two dots (••) to represent a "ditto" mark. This helps unclutter the Data Display. This simply means that an event type or channel is the same as the event directly above it.

_ If you have a color monitor, you will notice that different event types also have different colors to help the eye distinguish between them at a glance.

*See:* Edit <F10>

## NOTE DISPLAY <CTRL-N>

*Definition:*

The Note Ddisplay command <**CTRL-N**> toggles the MIDI Data Display's note events to be displayed using either Note names (C 4, Bb6, F#3, etc.) or Key Numbers ( 48, 82, 42, etc.). Hold down the <**CTRL**> key and press <**N**>.

*At A Glance:*

When in Pattern Mode:
**V**iew
<**CTRL-N**>
*MIDI note display toggles between key numbers and note names.*

*Comments:*

This is useful for remapping drum machines that display notes differently. For example, the Yamaha RX-11 displays note values in Key numbers rather than Note Names. To do any kind of work involving these values with Texture you would most likely want to display the notes as Key Numbers.

*See:* Edit, MIDI Data Display, View

## TRACK MAP SELECTION KEYS

*Definition:*

The Track Map Selection keys allow you to select or deselect specific tracks to be scheduled for use by one of many Texture commands such as Transpose and Erase.

When issuing any command which allows a track selection to be applied, you will be prompted with a Track Map Display with the tracks **a** through **x** listed <lowercase>, showing their current selection status. Use the Track Map Selection Keys to select or deselect specific tracks for various kinds of track manipulation via various Texture commands.

The use of these keys is similar to their operation during **M**ute/Monitor track selection (see **M**ute). You may also select a previously saved Track **S**ubgroup while in the Track Map Display.

*At A Glance:*

| When in a Track Map Display: | |
|---|---|
| **/** | Solo Select Track |
| **?** | Recall Previous Mute/Monitor Setting |
| ***** | Select All Tracks |
| **\|** | Flip or Invert Selection |
| <**1-7**> | Select a Previously Defined Track Subgroup |
| **, .** or <> | Move Forward/Backward to Adjacent Track |
| **m** or **M** | Select/Deselect Current Track |

This is a Track Map Display with no tracks selected:

```
Tracks abcdefghÝijklmnopÝqrstuvwx
          _ Track Name _
```

Use the < and > (unshifted) keys to move back and forth in the Track Map. You will see the blinking cursor move from track to track and the name of the current track displayed underneath the track letters. Use the <**M**> key to select and deselect a track. When a track is selected, it will appear in an upper case (capitol) letter. It will also be displayed in a different color if you have a color monitor.

*Summary of Track Map Selection Keys:*

**<** (Left Angle Bracket) or (**,**) (Comma): Move one track to the left.

**>** (Right Angle Bracket) or (**.**) (Period): Move one track to the right.

/ (Forward Slash): Solo Select Track (Select the current track and unselect all others).

***** (Asterisk): Select All Tracks.

**|** (Vertical Bar): Flip or Invert Selection (Select all unselected and unselect all selected).

(**1-7**) Select a Previously Defined Track Subgroup (see:Subgroup)

*See:* Multi-Track Display, Mute, Subgroup

## LINE EDITOR

*Definition:*

When Texture asks you to supply a name (track, file, pattern, etc.), the Line Editor is invoked. The Line Editor lets you type an editable character string which Texture can store or use. The same Line Editor is used for most numeric input (the Event Editor is an exception).

Most often, you'll use the Line Editor to name something. When you use the Name command to name a pattern or track or **S**ave or **L**oad a **F**ile, a Message Box will appear containing a suggested name. You may reject the suggested name by typing the first character of the new name. If you would like to keep what is there but change or add to it, move the cursor by using the right arrow cursor key to move to the position where you want to insert or overtype. You can toggle between Overtype and Insert Mode with the <**INS**> key. Texture's default setting is Overtype.

*At a Glance:*

When a character string is presented in a message box you may use the following keys to edit the text presented:

| | |
|---|---|
| <**RIGHT ARROW**> | Move cursor to right |
| <**LEFT ARROW**> | Move cursor to left |
| <**HOME**> | Move cursor to beginning of line |
| <**END**> | Move cursor to end of line |
| <**INS**> | Toggle insert/overtype mode (default: overtype) |
| <**DEL**> | Delete character at cursor position |
| <**BACKSPACE**> | Move the cursor one character position Backward and delete the character there |
| <**CTRL-U**> | Undo (restore original text) |
| <**CTRL-K**> | Kill (delete) characters from cursor position to end of line |
| <**ESC**> | Cancel editing |
| <**ENTER**> | Accept changes |

Alphanumeric keys and other ASCII symbols will be entered into the text as typed.

*Examples (Naming):*

**Adding Text**: To *add text* to the end of a line press <**N>** for **N**ame, select **T**rack or **P**attern and a Message Box will come up with the current name. Use the right arrow cursor key to move to one space after the last letter of current text and type in additional text (assuming there is space to do so). Hit <**ENTER**>.

**Overwriting text**: To *overwrite text* press <**N**>, select **T**rack or **P**attern and position the cursor over the old text and type in the new text. You can use <**CTRL-K**> to "kill" or delete any remaining old text to the right of your cursor. Hit <**ENTER**>.

**Inserting Text**: To *insert text* before existing text press <**N**>, select **T**rack or **P**attern and use the right arrow cursor key to move into position. Now hit <**INS**> to switch to Insert Mode (assuming you haven't already done this) and type the new text. Hit <**ENTER**>.

**Rename**: If you want to *rename* the track something totally different just type the new name at the Message Box and the old name will disappear leaving only the new text that you type.

**Undo**: To restore the original text before any new changes have been <**ENTER**>ed, use <**CTRL-U**>.

*See:* Name

---

## VERSION DISPLAY <ALT-V>

*Definition:*

The <**ALT-V**> key combination will display the Texture version window on screen so that you can view the version number of the program and the copyright notice. Hit any key to make the window go away. This is the same window which you see when you first start Texture.

If you need to call your dealer or Magnetic Music for technical support please be sure to have your version number handy before calling. This will aid us in helping you more efficiently and eliminate the need for you to call back after you have gotten the number. Versions previous to v3.1 will have the version number in the title bar at the top left-hand corner of the Texture screen (`TEXTURE 2.5R (a)`)

*At A Glance:*

<**ALT-V**>
TEXTURE v *(Version Number)*
*(Copyright Notice)*
Any Key to Continue >

# CHAPTER 5

# MIDI SETUP AND WORK ENVIRONMENT


Overview 1
Assign <**A**> 1
Channel 2
Port 4
Default Program (DMP) 4
Midi Thru <**6**> 6
Off 6
Enhanced 6
Standard 7
Output Ports 7
Dimension <**F1**> Pattern Mode 8
Default End Beat <**D**> 10
Timebase <**0**> 11
Buffer Size <**CTRL-B**> 11
Zap <**Z**> 12
Pattern Range 12
Track Names 12
Clipboard 13
Undo Buffer 13
Track Restrictions 14

# MIDI SETUP AND WORK ENVIRONMENT

*This chapter details how Texture deals with MIDI routing, pattern sizing, timebase settings, memory management and track restrictions. At the very least, you should become familiar with assigning channels (Assign), MIDI Thru and Dimension. The other sections may or may not be important to you, depending on the nature of your work.*

---

## ASSIGN <A>

*Definition:*

The Alpha Key command **A**ssign routes any track(s) to a specific MIDI channel and port; also Default MIDI Programs may be selected for any port/channel combination.

**A**ssign **C**hannel and **A**ssign **P**ort are typically used in a multi-instrument setup to send tracks to different MIDI devices. All the current channel and port assignments are displayed in the Multi-track display to the right of the track letters. **A**ssign **D**efault Program is used in cases when it is advantageous to create a table of the MIDI program messages for each MIDI device in your system which can be transmitted either by hot key <'> or every time playback or record is invoked.

Channel and port assignments (like track names) are global. This means that each assignment to a track spans ALL patterns (including the Linear Pattern). Default Programs are assigned to a global channel/port combination, not to individual tracks.

*At A Glance:*

**A**ssign
- **C**hannel / **P**ort / **D**efault Program
- **C**hannel
  - Tracks A-X *(Track Map Selection Display)*
  - MIDI Channel > *(Select a Channel (1-16) or (*) to Allow All Channels)*
- **P**ort
  - Tracks A-X *(Track Map Selection Display)*
  - MIDI Port > *(Select a Port number 1-8)*
- **D**efault Program:
  - DEFAULT MIDI PGMS
  - p**O**rt *(Select Port for Program Assignment)*
  - **C**hannel *(Select Channel for Program Assignment)*
  - **P**rogram *(Select Program Number: 0-127 or -1 for "none")*
  - **S**end On Play/Rec *(Toggle On/Off: Send Table Play/Rec Start)*
  - **D**elay Time *(Global Delay Setting, see "Delay")*
  - **T**ransmit All *(Send Default Program Table via MIDI)*
  - t**R**ansmit This Pgm *(Send This Program via MIDI)*
  - c**L**ear All *(Clear the Default Program Table)*

## ASSIGNING MIDI CHANNELS TO TRACKS

One MIDI channel can be assigned to many tracks. Conversely, data for many different MIDI channels may be contained within a single track. For example, you could record a bass line on Track A, Channel 1, a piano part on Track B, Channel 2 and a drum part on Track C, Channel 3. Then <**F3**> Blend Tracks B and C to Track A. This would mean that all three parts would be contained in the same track but would each play back on their own respective channel, as long as the track is assigned to allow all channels <*****>.

To better understand this, let's take a look "under the hood". Every MIDI event (as can be seen in Texture's MIDI Data Display) carries with it its own MIDI channel assignment. If your controller keyboard is outputting on channel 3, all events are individually "tagged" with the channel 3 assignment. When you assign a track to a channel, these channel tags remain intact, but Texture overrides them and sends the MIDI data to the channel the track has been assigned to. If you remove the track's channel assignment (shown as an asterisk: <*****>), each event will be routed to the channel it was originally assigned to (assuming you haven't changed it

with one of Texture's editing commands). If you were to <**F3**> Blend two or more tracks together that contain events with different channel assignments or record from another sequencer that is outputting MIDI data on multiple channels, setting the track's channel assignment to <*****> will allow coherent playback of the track.

*Example (Assign a Channel to a Track):*

Let's assume that you have two MIDI instruments hooked up to your computer. For argument's sake, your main keyboard is a Yamaha DX7. Your other instrument is a Roland D-50. You wish to set up different sounds on each instrument and have two Texture tracks, each assigned only to a particular instrument.

First, following each instrument's owner's manual, set up the MIDI RECEIVE on your DX7 to Channel 1 and the MIDI RECEIVE on your D-50 to Channel 2. Now go to Texture. We'll assign Track A to the DX7 and Track B to the D-50. Since Texture begins with all tracks preset to allow all channels <*****>, you would assign Track A to channel 1 to "speak" to the DX7. Otherwise, whatever channel you transmit on while recording the track will be the one that is transmitted when the track is played back. To Assign Track A to Channel 1 hit <**A**> (**A**ssign), then <**C**> (**C**hannel). The Track Map Selection Display will appear at the bottom left of your screen with Track A highlighted since it's the current track. Hit <**ENTER**> to accept Track A as the track to be assigned. You will then be prompted to input the number of the MIDI channel you want the track assigned to. Type: **1** followed by <**ENTER**>. Track A should now be assigned to MIDI Channel 1 which is reflected in the Multi-track display (replacing the <*****> character, three characters to the right of the track letter "A").

To set up Track B for the D-50 hit **A**ssign. Then **C**hannel. You will again be prompted to select a track or tracks. Using the Track Map Selection keys, move the cursor to Track B. Then hit the solo select key </> and press <**ENTER**> to choose only that track. Now assign the MIDI channel number by typing **2** followed by <**ENTER**>. Track B will now send its data out on MIDI Channel 2 to be received by the D-50.

See **<6> MIDI Thru** (Enhanced MIDI Thru), for more information about the affect of assigning MIDI channels to tracks with regard to MIDI Thru routing.

## ASSIGNING MIDI OUTPUT PORTS TO TRACKS

*Example (Assign a MIDI Port to a Track):*

> *Note: If you have only one MIDI out port on your MIDI interface card (as is the case with a Roland MPU 401 or IPC), you may wish to skip over this section. Assigning a non-existent port to a track will have the affect of muting the track.*

For this example, we will assign Port 2 to Track A: Goto <**;**> Track **A**. Hit **A**ssign. Then hit **P**ort. At the Track Map Selection Display prompt, hit <**ENTER**> to select the current Track (A). Now, type the port number, **2** <**ENTER**>. The new port number is shown in the Multi-track display directly to the right of the track letter, "A".

## ASSIGNING DEFAULT MIDI PROGRAMS

*Definition:*

Default MIDI Programs (DMP's) are stored in a global (not per-pattern) table. The table has space for one program per channel/port combination (16 channels per port). You can have Texture transmit the table whenever

**P**lay or **R**ecord is invoked (**Send On Play/Rec**), or you can force a transmit at any time by hitting the apostrophe <'> key. The DMP window does not have to be present to use the <'> command.

> *Note: When using the DMP menu, remember to always have the correct p**O**rt and **C**hannel selected **before** selecting the **P**rogram number.*

*Example (Assigning a Default Program):*

Hit **A**ssign, then **D**efault Program. You will now see the DMP window at the bottom left of your screen. Assume, for the moment, that you want to assign program 112 as the default program ("patch") to a keyboard which is receiving MIDI data on Port 2, Channel 3. Choose **O** for p**O**rt, followed by the number **2** to select port 2. Choose **C**hannel, followed by the number **3** <**ENTER**> to select Channel 3. Choose **P**rogram, followed by the number **112** <**ENTER**> to select Program #112. You have just made an entry into the DMP Table. It will stay there until you either change it, choose **L** for c**L**ear All, or load another song into Texture. (The entire DMP Table will be stored and reloaded with each song.)

*Comments:*

There are several other things you can do while in the DMP window. You can use it to browse through your existing DMP's: Choose a p**O**rt, then use the <+> and <-> keys to browse through the table by MIDI channel. As mentioned above, you can clear the entire table with c**L**ear All. To clear an individual entry, simply choose **P**rogram and type <**-1**> <**ENTER**>.

> If you toggle on **S**end On Play/Rec, every time you hit **P**lay or **RR**ecord, the DMP table will be transmitted.

You may also select to transmit only the current program setting (with its p**O**rt and **C**hannel assignments) shown in the DMP table by hitting <**R**> for t**R**ansmit This Pgm.

You may set the global **D**elay Time from this window (see also: **Delay Time**). The global Delay Time has different ramifications in different situations. Its meaning here is that you might experience some equipment "hiccups" if note data is sent out too soon after a MIDI program is issued. Setting the Delay Time to **1** (1 second) will usually cure this problem by pausing before playback when **Send On Play/Rec** is on.

**T**ransmit All will send the DMP Table on command. Note that there is also a hot key <'> which will send the DMP Table at any time, even during playback.

*Note: Many keyboards and sound modules have a translation table that converts an incoming MIDI Program event to the "front panel" patch name/number of your choice. Make sure you understand how your MIDI devices interpret the program numbers that you're sending from the Default MIDI Program Table in Texture.*

If you experience a problem with a particular MIDI device on table transmission, read the section entitled **DOS Environment Variables** in the **File Management And DOS chapter**.

---

**MIDI THRU <6>**

*Definition:*

MIDI Thru <**6**> enables the keyboard or controller attached to the MIDI in port of your computer's MIDI interface to control other MIDI instruments attached to the out port(s) of the interface. MIDI Thru is accessed by pressing number key <**6**>. You are offered three choices: **O**ff turns MIDI Thru off, **E**nhanced turns on a *smart* MIDI Thru and **S**tandard turns on normal MIDI Thru.

*At A Glance:*

<**6**> MIDIThru
MIDI THRU: **O**ff / **E**nhanced / **S**tandard (*Current Setting*)
Enter Letter >

**STANDARD**

**S**tandard MIDI Thru will simply echo back any MIDI arriving at your computer's MIDI input to its output.

In this mode, Texture is able to "hear" and record the incoming data, but also sends it out the out port(s). Whatever channel the data comes in on, it goes out on. For example if your Master Keyboard is putting MIDI data out to channel 4, any keyboard set to receive on channel 4 will sound as a

result. Switch the Master Keyboard to transmit on channel 5 and any keyboard set to receive on channel 5 will sound.

## ENHANCED

**E**nhanced MIDI Thru takes into account the channel assignment of the current track you are positioned on.

If track A is assigned to channel 5 and track B is assigned to channel 6, positioning to track A will result in your Master Keyboard "playing" any keyboards set to receive on channel 5. Positioning to track B will automatically cause your Master Keyboard to "play" any keyboards set to receive on channel 6. This can be very handy for anyone who uses the **A**ssign **C**hannel command on a regular basis as they will not have to change the Transmit Channel on their Master Keyboard very often. It is especially handy if you are trying to use an old DX7 as your Master Keyboard, as this and other MIDI pioneer instruments don't let you assign a Transmit Channel other than channel 1.

When using Enhanced, if you position to a track with no channel assignment (*****), the incoming MIDI data is echoed to MIDI out as it is when in Standard MIDI Thru.

*Note: The performance of Enhanced MIDI Thru mode will vary depending on the computer, CPU speed and interface you are using. If Enhanced MIDI Thru is not acceptable for one reason or another, use Standard MIDI Thru.*

## OUTPUT PORTS

In both MIDI Thru On modes, MIDI data is routed to the port assigned to the track you are currently positioned on. This is only an issue if you have a multi-port setup.

*Example (Enhanced):*

Position to any track. The track's port and (if **A**ssigned) channel assignment is used to re-route the incoming MIDI data to that Port/Channel. This greatly simplifies the recording process. Just position to a track and go! You will automatically "hear" the device which is **A**ssigned to the track you are currently located on.

*Comments:*

**S**tandard is recommended for sequencer to Texture transfers via MIDI and any other high traffic usage.

| |
|---|
| *See:* Hardware Appendix |

---

## DIMENSION <F1> (PATTERN MODE)

*Definition:*

Dimension redefines the Begin and End boundaries of the current pattern. Dimension is a Function Key Command (from Pattern Mode, <**F1**>). Dimension can be used to increase or decrease the length of the currently selected pattern. It can also be used to chop time off the beginning of the pattern.

If you use Dimension to shorten a pattern that already contains MIDI data, Texture will automatically delete any MIDI data that falls outside of the newly dimensioned pattern boundaries. **U**ndo will un-redemension the pattern and restore any deleted MIDI data.

It is legal in Texture to Dimension a pattern to a resolution of subbeats (equivalent to MIDI clocks or 24ths of a beat). For instance, a pattern length of 9:12 equals exactly 8 1/2 beats in length. (Since number **9** represents the **beginning** of the ninth beat and the number **12** represents the beginning of the second half of the ninth beat, the pattern ends with 8 1/2 beats having been played. If you find this confusing, please read the section entitled **Beat Notation** in the **Texture Fundamentals** chapter.)

*At A Glance:*

| |
|---|
| When in Pattern Mode:<br><**F1**> Dimension<br>DIMENSION Pattern Boundaries<br>New Begin *(Default 1:00)* > // End *(Default End Beat)* > |

*Example (New Pattern):*

Texture automatically sets the end of each pattern to 1000:00 upon bootup (i.e. each pattern is 999 complete beats long), but durations don't have to

stay that way. While in Pattern Mode, press <**F1**> to invoke Dimension. You will be prompted: **New Begin 1:00**. Press <**ENTER**> to accept the Default value of Beat 1:00 for the start of the pattern. Next you will be prompted: **End 1000:00**. Note that the default end is the number of the beat on which the pattern will actually end, (that is, to create a 12 beat pattern type in an End Beat of 13, etc.). To create a shorter pattern type in a number smaller than 1000:00 and press <**ENTER**>. The pattern will now be shortened to the prescribed amount, and the new end is displayed in the upper left screen **END *(number)***.

Patterns can be lengthened in a similar fashion by inputting a new end time that is greater than the original.

*Example (Re-dimensioning a Pattern):*

This aspect of <**F1**> Dimension is handy for quickly getting rid of a section or sections of an entire pattern's worth of data at once. That is, you simply re-dimension a pattern's begin and end beats to coincide with the region of data you want to keep. From the Pattern Menu, choose <**F1**> Dimension. At the **New Begin 1:00** prompt type the starting beat for the region you want to keep and hit <**ENTER**>. At the **End** *(Current Pattern End Beat)* prompt, type a number that corresponds to the new end beat for the region you want to keep and press <**ENTER**>. All the data prior to your new begin beat and after your new end beat will be deleted from the pattern and the pattern is re-sized to house only the region you selected.

*Comments:*

In the above example you could use **U**ndo to correct a possible operator error. It is sometimes helpful to first **C**opy the pattern to an unused pattern for future access to the data you are about to lose.

_ The minimum Dimensions of a pattern are a begin at 1:00 and an end at 2:00 which corresponds to a one-beat pattern duration.

_ The maximum Dimension of a pattern is 2728 beats in length.

*Note: The actual Duration of a pattern is displayed at the top of the Right Window next to the Pattern label (in Pattern Mode only). This number is the actual Duration of the pattern (always end beat minus 1). Also, the **O**utline **L**inks or **P**atterns command will show you the Durations, not the end beats.*

_ **U**ndo will reverse the Dimension command provided that no track data has been changed in Texture since the command was issued.

*See:* Beat Notation, Copy, Default Duration

---

## DEFAULT END BEAT <D>

*Definition:*

The **D**efault End Beat command sets the end beat of all Inactive Patterns. Default is an Alpha Key Command accessed by hitting the <**D**> key. Patterns that have either been named or have been assigned to a link or contain MIDI data will not be affected.

*At A Glance:*

**D**efault
Set Default End Beat for Inactive Patterns >

*Example:*

Texture defaults inactive patterns to an end beat of 1000:00. To make all currently inactive patterns have a different end beat, press **D**efault End Beat. You will be prompted: **Set Default End Beat for Inactive Patterns** >. Respond by typing the appropriate number and pressing <**ENTER**>. All blank patterns will now have the new end beat you entered.

*Comments:*

Regardless of the Default End Beat setting, any individual pattern may be <**F1**> Dimensioned to a different length as desired. The **D**efault command affects only inactive patterns.

*See:* Dimension <F1>

_ **U**ndo will reverse the Default command provided that no track data has been changed in Texture since the command was issued.

## TIMEBASE <0>

*Definition:*

The Number Key Command <**0**> **Timebase** sets the value for the number of internal clocks per beat. The default timebase is 96 internal clocks per beat (i.e. 4 internal clocks per MIDI clock). The current timebase is displayed in the lower Left Window.

> *Note: See the **Timebase** section in the chapter **Texture Fundamentals** for a more detailed explanation of timebases.*

*At a Glance:*

| |
|---|
| **0** Timebase<br>Timebase: **1**·48 **2**·72 **3**·96 **4**·120 **5**·144 **6**·168 **7**·192<br>Enter Number > |

*Example:*

To change the default Timebase (96), press <**0**>. Select the desired setting by pressing the appropriate number (press **1** for a timebase of 48 etc.), no <**ENTER**> necessary. Data recorded at one timebase will be out-of-sync when played back at another setting.

| |
|---|
| *See:* Texture Fundamentals |

## BUFFER SIZE <CTRL-B>

*Definition:*

<**CTRL-B**> resets the size of the MIDI Event Buffer. This buffer is used as a holding area for incoming MIDI events when recording and is also utilized in many editing procedures to help avoid memory fragmentation. <**CTRL-B**> is invoked by holding the <**CTRL**> key down, then pressing the <**B**> key.

When you first start Texture, the MIDI Event Buffer is set to be either 64k (8190 events) or one fifth the size of available Random Access Memory (RAM), whichever is smaller. This command allows you to re-size the buffer to any value from 1 - 8190 (assuming you have enough RAM available).

*At A Glance:*

| |
|---|
| <**CTRL-B**><br>Enter New Maximum Number of Buffered Events (1-8190)<br>Enter Value > *(Current Size)* |

*Example:*

Let's say you are trying to transpose a large track and you are presented with the message **Event Buffer Full**. Hit any key to continue then type <**CTRL-B**> to see the message **Enter New Maximum Number of Buffered Events (1 - 8190)**. After **Enter Value** you will see a number which represents the current size of the buffer (represented in number of MIDI events). Type over this number with a larger one to increase the size of the buffer and try the transpose operation again.

Conversely, you may be trying to load a very large song into Texture and you are presented with an **Out of Memory** message. In this case, you can try using the <**CTRL-B**> command to **decrease** the size of Event Buffer to make more RAM available for the song.

| |
|---|
| *See:* Buffer |

---

**ZAP <Z>**

*Definition:*

**Z**ap is an Alpha Key command used to clear a range of data of a certain type (**P**attern Range, **T**rack Names, **C**lipboard, **U**ndo Buffer).

_ **P**attern Range: Clears all MIDI data over a range of patterns. Use this when you have MIDI data that you no longer need in one or more patterns. Keep in mind that **U**ndo will not restore Zapped data.

_ **T**rack Names: Clears all track names (affecting all patterns by nature). This is no more than a simple way to remove all track names with one command.

_ **C**lipboard: Clears all data from the clipboard. If you are running low on memory, and have a lot of data sitting in the clipboard, you can use this command to dump it.

_ **U**ndo Buffer: Clear all data from the undo buffer. Depending on what was last undone, there can be a very large amount of data sitting in the Undo buffer. If you are running low on memory you can choose to empty the Undo buffer with this command.

*At A Glance:*

**Z**ap
ZAP: **P**attern Range / **T**rack Names / **C**lipboard / **U**ndo Buffer
Enter Letter >
**P**attern Range
Pattern Range: Low > High: >
Data Will Be Lost! OK to ZAP >
*(N or <ESC> for no, Y or <ENTER> for yes)*
**T**rack Names
Clear All Track Names?
**Y**es / **N**o *(Y or + for yes, N or - for no)*
**C**lipboard
Clear The Clipboard?
**Y**es / **N**o *(Y or + for yes, N or - for no)*
**U**ndo Buffer
Clear the Undo Buffer?
**Y**es / **N**o *(Y or + for yes, N or - for no)*

*Example (Pattern Range):*

To clear a range of Texture patterns press <**Z**> to invoke **Z**ap followed by <**P**> for **P**attern range. You will be prompted: **Pattern Range: Low >**. Type in the lowest pattern number to Zap, followed by <**ENTER**>. Next you are prompted for **High >** (this defaults to the value of **Low**, handy for zapping one pattern only). Type in the number of the highest pattern to Zap, followed by <**ENTER**>. You are then prompted: **Data Will Be Lost! OK to ZAP?**. Press <**Y**> or <**ENTER**> to proceed or <**N**> or <**ESC**> to abort. All patterns *between* and *including* **Low** and **High** will be cleared of

all MIDI data and pattern names. Also, these patterns' end beats will be set to the system default end beat (see **Default End Beat** in the **MIDI Setup and Work Environment** chapter). Remember, **U**ndo will not restore Zapped data.

> *Note: To clear a song completely from memory, use **File New** (see **New** in the chapter **File Management and DOS**).*

*See:* Default End Beat, Erase, New, Quick Erase <CTRL-E>, File Management

---

## TRACK RESTRICTIONS

*Definition:*

Tracks may contain up to 64k of MIDI data, but you may never see a track anywhere near this large unless it has been imported from a Standard MIDI File. The reason for this is that most operations require conversion to an internal event list before a track can be created or revised.

An event list also has a maximum capacity of 64k and the MIDI data takes up much more space in the event list format. An event list can hold 8190 midi events and these events will fit comfortably in a Texture track. The size of an event list may be somewhat smaller than 8190 events if you don't have a fair amount of Random Access Memory (RAM) available when you boot up Texture. You can adjust the size using the <**CTRL-B**> command (see **Buffer Size**).

*Memory:*

A track will not be able to hold any new data if you don't have any RAM available. Keep an eye on the Memory indicator in the top left window. If it's reading between 0 and 10k after an operation is complete, you are running extremely low on memory and will not be able to perform certain operations (see **Zap**).

*Overlapping Notes:*

A single track may not contain overlapping *same* notes directed at the same MIDI channel. If you have two **C3**'s with matching internal channel

assignments, they will not be allowed to overlap (note-on, note-on, note-off, note-off). If any editing or recording procedure produces such a situation, it will be corrected before the data is stored to a track. The way Texture corrects this is to shorten the duration of the first note so that it ends on the tick where the second note begins. Both notes are still present, but they no longer overlap. Texture's editing ability would be handicapped if this rule were not enforced.

*See:* Buffer Size, Edit <F10>, Texture Fundamentals, Zap

# CHAPTER 6
# RECORDING AND PLAYBACK


Overview 1
Record <**RR**> 1
Play <**P**> 3
Stop/Continue 4
Speed Offset <**[ ]**> 5
Count <**4**> 6
Tempo <**T**> 7
Metro <**3**> 8
Intro <**I**> 9
Loop <**L**> 10
Track Mute & Monitoring 11
Mute <**M**> 12
Solo / 12
All * 12
Previous **?** 12
Flip | 13
Subgroup <**S**> 13
Punch-In/Out 15
Autopunch <**2**> 2
Panic Button <**CTRL-A**> 17
Jump <**J**> 18
Controller Reset <**7**> 19
Touch Receive <**5**> 19
Timer Mode <**CTRL-T**> 20
Elapse 20
Reset 21
Time-of-Day 21
Buffer <**B**> 21
Step Recording <**CTRL-R**> 23
Chase Events <CTRL-C> 27
Enable 29
Programs/MIDI Event Types 29
MaX Table Entries 29

- Chase Event Table (CET) 29
- Delay 30
- Report & Test 30
- Delay Time 31
- Assign Default Pgms 32
- Chase Events <CTRL-C> 33
- SMPTE/Time Code Settings <CTRL-P> 33
- Keymap <**CTRL-K**> 33
- Keymap Function 34
- Transpose Function 35
- Velocity Function 35
- Port Functions 36
- Text File Creation 37
- Loading & Clearing 37

# RECORDING AND PLAYBACK

*This chapter covers the Texture functions which allow you to record and playback MIDI data. We'll start with the fundamental Record and Play operations and make our way through the various real-time options such as tempo, loop, track muting, punch in and punch out. The last third of the chapter is devoted to advanced features. These include working with the record buffer, step recording, chasing MIDI events and creating a keymap file.*

---

## RECORD <RR>

*Definition:*

Issuing **RR**ecord time-stamps all incoming MIDI data while playing back all but the currently selected track. The incoming data is placed into the Record Buffer and is saved to the currently selected track when recording is stopped. An Alpha Key Command, **RR**ecord is available in Pattern Mode. It is available in Link Mode if a Linear Pattern has been assigned. During Play, <**R**> may be pressed to Punch-In and Out on the current track. Normally, **RR**ecord is invoked by hitting <**R>** twice. When referring to this process throughout this manual, you will see the record command written as "**RR**ecord".

*At A Glance:*

| |
|---|
| **R**ecord<br><**Record Ready**> *(Flashing Display Upper Left Screen)*<br>**R**ecord *(=RECORD= Display Upper Left Screen)*<br>*(Buffer Number of Events Free Display-Record Status Window)* |

| |
|---|
| To Punch-In, press <**R**> while playing.<br>To Punch-Out, press <**R**> while recording. |

*Comments:*

Use <**SPACE**> to Stop at any time or, if **L**oop is not engaged, recording will stop automatically at the End of the pattern.

You may also use <**ENTER**> to stop playing and reset the start beat to the beat at which you stopped.

Use <**ESC**> while recording to Stop without keeping recorded Data.

*Example (Record):*

Assuming that you have set up your equipment as described at the beginning of this manual and you're in Pattern Mode, press <**R**>. The screen will flash in several places to indicate Record Ready mode. Press <**R**> again. If you have enabled the **Metro**nome (**3**), the metronome will start to beep. If you have enabled **Count** (**4**), you will see a countdown displayed. As soon as the display says **RECORD** (upper left screen), start to play on your master keyboard or MIDI Controller. As soon as Texture starts to record, an indicator in the upper Left Window will appear showing the remaining number of events in the Record Buffer. At the end of the pattern, recording will automatically stop and what you played will be saved to the current track. The actual number of bytes recorded will vary depending on how much data you generated during the performance. Hit <**P**> to **P**lay back your pattern.

*Example (Overdubbing):*

**RR**ecord data onto an empty track. Next, move to a second empty track and enter **RR**ecord again. You will hear the data recorded onto the first track while you are **R**ecording onto the second track. When you stop recording and start **P**layback, the tracks will be in sync with each other (as close to "in sync" as you played them).

*Example (Record while Looping):*

If you turn on **L**oop the current pattern will repeat. While looping you can record multiple, different takes into the Record Buffer. Then, using the **B**uffer command, you can save these various loops to different tracks and/or patterns (see **Buffer**).

| |
|---|
| The Record Buffer is a type of temporary "reservoir" for the music you have just recorded. The buffer remains intact until you enter Record again. |

*Example (Linear Pattern):*

While you cannot record into links themselves, you can designate a Linear Pattern in Link Mode, and then **RR**ecord into its 24 tracks while playing along with the (Linked) Song. Tracks may be recorded into the Linear Pattern in Link mode in essentially the same way as they are recorded in Pattern Mode. See the section on Linear Pattern for more details.

*Comments:*

Texture gives you several ways to record MIDI data onto any of the 24 tracks. In addition to the simple **RR**ecord command described here, you also have the options of **Autopunch**, **Punch In/Out**, **Step Record**, and inserting data via Edit Mode <**F10**>.

_ **U**ndo will reverse the Record command provided that no track data has been changed in Texture since the command was issued.

*See:* Autopunch, Buffer, Linear Pattern, Loop, Overdubbing, Punch In-Out, Step Record

---

**PLAY <P>**

*Definition:*

The **P**lay command enables a pattern or a series of linked patterns to be played back. **P**lay is an Alpha Key Command invoked by pressing <**P**>.

*At A Glance:*

**P**lay
Hit <**SPACE**>, <**ESC**>, **P**lay to stop
Hit <**SPACE**> to Continue after Stop
Hit <**ENTER**> to Stop and Reset Current Start Beat

*Example:*

Record a track in a blank pattern. **P**lay it back by pressing <**P**>. The Pattern will now play until you press <**SPACE**> or the pattern ends. Pressing <**SPACE**> again will continue playing from the current beat.

Pressing <**ENTER**> during playback will stop playing and reset the start beat to the beat/sub-beat where you stopped. You may then resume playing from that beat by pressing <**P**> or **V**iew to look at the tracks at that particular location. This is handy for viewing/editing track data based on an auditory cue.

*Comments:*

The **P**lay command will start play at the beginning of the current pattern or link. However, you can temporarily set a different start beat offset within a pattern by using either the cursor keys, the **G**oto **B**eat command or the <**ENTER**> key to stop and reset the start beat to wherever you stopped. In Pattern Mode, **P**lay will begin at the start beat and stop and the end beat. If Loop is enabled it will loop back to the start beat until you reset the start beat or change patterns.

*See:* Goto, Jump, View, Edit

---

## STOP OR CONTINUE

*Definition:*

There are various ways to *stop* recording or playing a pattern or link in Texture. <**SPACE**>, <**ESC**> and <**P**> will all simply stop the play/record mechanism. Hitting <**ENTER**> issues both a stop command and moves the current start beat to the current location.

The <**P**> takes on a different meaning when Texture is already in **Stop** mode: It then becomes **P**lay. Repetitively hitting <**P**> will keep restarting playback from the current start beat. (see **Play**)

The <**SPACE**> key is also used to issue a *Continue* command whenever Texture is in **Stop** mode. Playback will continue from the current beat (not to be confused with the current *start* beat).

*At A Glance:*

| | |
|---|---|
| <**SPACE**> | *(Stop Play/Record / Continue From Current Location)* |
| <**ENTER**> | *(Stop Play/Record and Set New Start Beat)* |
| <**ESC**> | *(Stop Play)* |
| **P**lay | *(Stop Play, Continue at Pattern Start Beat)* |

*Comments:*

_ <**SPACE**> is used to Stop **P**lay or **R**ecord. Press <**SPACE**> again to continue playing from where you left off. Hitting <**SPACE**> to Stop/Continue is cumulative until the pattern or link end beat is reached. The BEAT counter will then be set at 1:00, and any further **P**lay or **RR**ecord will start from this beat.

_ <**ENTER**> is used to Stop **P**lay or **R**ecord and set a new start beat. Press <**P**> or <**SPACE**> after a new start beat has been <**ENTER**>'d to continue playing. You may stop again by hitting <**SPACE**> or <**P**> to keep the start beat, or hit <**ENTER**> to set a new start beat.

_ <**P**> may be used to stop **P**lay or **R**ecord. Hitting <**P**> again will start play from the pattern or link begin beat.

_ <**ESC**> may be used to stop **P**lay or **R**ecord. You can then continue by hitting <**SPACE**> to start from the current stop beat, or <**P**> to start from the pattern or link begin beat.

You may also move to the beginning of the Link or Pattern by using the **G**oto **B**eat command, or hit <**HOME**> to return to the beginning of a Pattern.

*See:* Goto Beat, Play, Record

---

## SPEED OFFSET

*Definition:*

The Speed Offset option enables the current tempo value to be temporarily offset. Speed is controlled by three keys that can be used at any time. Via the <[> and <]> keys, speed offsets may be made ranging from -99 to

+99 of the current tempo (limited by the absolute minimum/maximum tempos allowed by your MIDI hardware interface. The <**BACKSPACE**> key toggles between no speed offset and the last value set by the user. The current amount of Speed Offset is displayed to the right of **TEMPO** in the Left Window next to the word **SPEED**.

*At A Glance:*

| |
|---|
| [ Offsets the tempo slower (to -99)<br>] Offsets the tempo faster (to +99)<br><**BACKSPACE**> Toggles between the current Speed value and Speed Offset 0 |

*Example:*

To record or playback a track, pattern, or link at a slower speed than the current **T**empo, hold down the **<[>** key until the desired Speed Offset is reached. Press the <**BACKSPACE**> key to toggle the offset on and off. To increase the speed use the **<]>** key.

*Comments:*

Speed offsets enabled by the **<[>** key will show as minus figures.

| |
|---|
| You may invoke the Speed offset at any time, including while in Playback or Record. |

Speed offset amounts are equivalent to adding or subtracting beats per minute. In other words, setting speed to 20 when **Tempo** is 120 will change the tempo to 140 temporarily. Likewise, setting speed to -20 when **Tempo** is 120 will change the tempo to 100 temporarily.

| |
|---|
| *Note: The amount next to the word **TEMPO** will not reflect the current actual tempo when using the **Speed Offset** keys. To determine the current tempo, simply add **SPEED** to **TEMPO**.* |

| |
|---|
| *See:* Tempo, Link Mode: Relative Tempo, Scale Tempo |

## COUNT <4>

*Definition:*

The Count is a sequence of beats occurring prior to playback or recording. The current Count is displayed directly below the Metro setting in the Left Window. If the Count is turned off, then Texture will display a Count of 0.

The Count is set by the Count command (number key **4**) and can be turned off either via the **I**ntro toggle (see **I**ntro) or by setting a Count of 0 (zero).

*At A Glance:*

| |
|---|
| **4** Count<br>Count Off Duration (0 - 9)<br>Enter Number > |

*Example:*

Let's say that you wish to record a phrase that begins on the downbeat of a pattern. Using the Count command (Number Key <**4**>), set the Count for a duration of **4**. Be sure the Metronome <**3**> is on; then press **RR**ecord. The first four beats you'll hear are the Count to help you hear the meter. The fifth beat marks the first downbeat of the pattern.

*Comments:*

During the Count, Texture is actually recording when in Record Mode. Any notes played prior to the actual downbeat are moved to Beat 1:00.

| |
|---|
| *See:* Advance 9, Metronome 3, Intro, |

## TEMPO <T>

*Definition:*

**T**empo enables the master Tempo of a Song to be set in Beats Per Minute. Tempo is an Alpha Key Command and its current value is displayed in the upper left window. The Tempo range varies with the timebase setting, the extremes being between 8 and 240 beats per minute.

*At A Glance:*

| |
|---|
| **T**empo<br>Master Song TEMPO > |

*Example:*

Press <**T**> to invoke **T**empo. Type a number and hit <**ENTER**>. The new tempo displayed in the Left Window will be the (number)beats/minute.

*Comments:*

Tempo may be offset via the Speed controls ([ and ]) in which case the actual Beats Per Minute will be a function of the Tempo and the Speed values combined.

Tempo may also be affected via the <**F5**> RelTempo and Rate of Graduation features in Link Mode. See the separate entries for details.

*Note: You may experience tempo variation between different MIDI interfaces from different manufacturers. Do not assume that this will be rock-solid when you change interfaces. However, you should experience no difference from session to session when using the same hardware.*

MPU-401 and Compatible Tempo Ranges:

| Timebase | Tempo Range (in BPM) |
|---|---|
| 48 | 32 - 240 |
| 72 | 16 - 240 |
| 96 | 16 - 240 |
| 120 | 8 - 240 |
| 144 | 8 - 208 |
| 168 | 8 - 179 |
| 192 | 8 - 179 |

*See:* RelTempo <F5>, Speed Offset, Timebase

*Definition:*

The Metro command sets the number of metronome beeps per beat. Metronome functions are available by pressing number key <**3**>. The current number of beeps per beat is displayed in the Number Key Command Menu in the bottom left window. You may choose 0, 1, 2, 3, 4 or 6 beeps per beat; 0 turns the metronome off.

Metronome capability may vary depending on your hardware setup. Using a Roland MPU 401 or IPC, you will hear an audible "beep" from the external MIDI connector box. You can also use the Metronome Out jack on this box to plug the metronome output into an audio amplification system.

*At A Glance:*

```
<3> Metro
   Metro Beeps per Beat (0,1,2,3,4,6)
   Enter Number >
```

*Example:*

To set the metronome press <**3**>. You will be prompted to enter the number of Beeps per Beat. Type the appropriate number and hit <**ENTER**>. Now, when you issue a **P**lay or **R**ecord function, you will hear the number of beeps you entered for every beat. The current setting will be displayed as musical notes to the right of the word **Metro** in the bottom left window.

The Metronome may be shut off by using the **I**ntro command (which will also affect the current Count On/Off status) or by simply entering a Metro beeps-per-beat value of 0.

*See:* Intro, Count, Tempo

## INTRO <I>

*Definition:*

**I**ntro toggles both the Count and Metro functions *on* and *off* as a unit. **I**ntro is an Alpha Key Command.

*At A Glance:*

| |
|---|
| **I**ntro |

*Example:*

To disengage the count-off (**4** Count) and metronome (**3** Metro) settings you have previously entered, hit **I**ntro. Both Count and Metro will be turned off. To re-engage, press **I**ntro again. The settings will remain the same until you invoke commands **3** (Metro) or **4** (Count) to change them.

*Comments:*

**I**ntro is a very fast way of toggling the Metronome and Count functions. You may use it during playback or recording.

You can set the Intro function so that it toggles the metronome on and off with no Count by resetting Count to 0 while the Intro function is toggled On.

| |
|---|
| *See:* Count, Metro |

## LOOP <L>

*Definition:*

The Loop option lets the current pattern or link be continually repeated until <**SPACE**> or <**ENTER**> is pressed. Looping in playback can go on indefinitely.

When recording, **L**oop enables up to 255 "takes" of a pattern, restricted only by Record Buffer space. The different recorded loops are stored in the Record Buffer and may be kept to different tracks via the **B**uffer

command. **L**oop may be toggled on or off at any time, including while recording or playing back. Loop on or off is displayed as either **LOOP** or **.....** (blank) in Upper Left Window.

*At A Glance:*

| **L**OOP *(Enable/Disable>* |
|---|

*Example (Recording with Loop):*

Here's a simple example of how to work on your music without stopping. First, use the Dimension command <**F1**> to create a pattern with a specific End Beat. Turn on **L**oop by pressing <**L**>. **RR**ecord on any track. If you make a mistake the first time you record don't stop Texture, just wait for the beat counter to wrap-around to Beat 1:00. Try again. When you're satisfied with the line, hit <**R**> again. You will drop out of record and the last loop that you played will be saved to the current track. Now, move to another track and hit <**R**> again. You can now record on the new track. When you're finished press <**R**> again and you'll fall out of record. Move to a third track but keep the music going. Record another line following the instructions above.

Via **L**oop and **R**ecord you can layer a drum part (on a MIDI drum machine) in a fashion similar to drum machine programming. Use as many tracks as you like to create the drum data and use Texture's editing commands to shape the tracks to taste. When you're done, you may choose to <**F3**> Blend them down into one concise track.

*Example (Buffer):*

The **B**uffer command lets you keep any or all loops you've recorded. You can find them by pressing <**B**>. With the **B**uffer you will be able to keep (copy) the loop number of your choice to the track of your choice. This is a fast method for organizing your spontaneous ideas. Once you enter **R**ecord again, the **B**uffer is cleared; any loops not kept to a track will be erased.

*Comments:*

Note that if you set a different start beat (in Pattern Mode) with either the <**ARROW**> keys or the **G**oto **B**eat command you will always loop back to the new start beat. Plus, any **L**oops accessed by **B**uffer will be saved beginning at this beat.

*Note: In Link Mode, **L**oop is turned off whenever playback is started. **L**oop can be re-engaged once playback has begun. This was designed to prevent unintentional looping when beginning song playback. In Link Mode, **L**oop will always loop back to the beginning of the current pattern, discarding any offset for the initial beat after using it once when commencing playback.*

*See:* Buffer, Repeat

## TRACK MUTING AND MONITORING FUNCTIONS

*Definition:*

(Mute, Solo, All, Previous, Flip and Subgroup Commands) The following functions allow you to turn tracks on and off in real time. These functions will work during recording, playback or stop modes. They work while in Pattern or Link modes and some have a direct relationship with the Track Map Selection keys (which are used to select tracks in various editing and Link Mode commands).

_ The word *mute* refers to a track that is **off**.

_ The word *monitor* refers to a track that is **on**.

*Note: The following functions do not override Link Mode mutes and will have no effect in Link Mode over the Linear Pattern Tracks.*

### MUTE

**M**ute *(Toggles Mute On/Off Current Track)*

To **mute** a track is to turn off playback of the track. The **M**ute command will toggle the current track on or off. To use this command, position to the track you wish to mute and hit **M**ute (the <**m**> key). To un-mute the track, hit **M**ute again.

When a track is muted, the Upper Left Window will show the track letter in lowercase, as will the Upper Right Window when in Pattern Mode / Multi-track display.

**SOLO (/)**

*</> (Solo Current Track)*

To **solo** a track is to turn off playback of all other tracks while turning on the current track, leaving it to play by itself. To use this command, position on a track you wish to solo and hit </> (forward slash key). Solo is not a toggle function; Hitting </> again will not un-solo the track (other commands can be used to un-solo a track, read on...).

**ALL (*)**

*<*****> (Monitor All Tracks)*

The **All** command turns all tracks on (not a toggle command). To use this command hit <*****> (asterisk). All tracks are enabled for playback.

**PREVIOUS (?)**

*<**?**> (Return to Previous Monitor/Mute Setting)*

<**?**> recalls the last Monitor/Mute setting. A typical use of this command would be to return to a previous arrangement of muted tracks after issuing the **Solo** command. To use this command, hit <**?**> (question mark).

**FLIP (|)**

*<|> (Invert Monitor/Mute Setting)*

<|> inverts the current Monitor/Mute setting. Tracks that were muted are now monitored and vice-versa. A typical use would be to solo the drum tracks and then **Flip** to here everything but the drum tracks. To use this command, hit <|> (vertical bar key).

## SUBGROUP

You may save up to seven different Track Mute/Monitor settings called Subgroups. Track selection in various instances is enhanced by the ability to store and recall track Subgroup settings. Any combination of selected tracks currently being monitored may be saved to one of seven Subgroup Presets using the **S**ubgroup command.

**S**ubgroup
SAVE MONITOR TO SUBGROUP #1-7
**M** *(Monitor/Mute Display, Current Setting)*
**1** through **7** *(Subgroup Displays)*
Enter Number > *(to Save M to # 1-7)*

*Comments:*

Subgroups are often used to group types of tracks together for monitoring or editing purposes. A typical use would be to create a Subgroup of drum and/or percussion tracks. Another typical use would be to create a Subgroup of a horn or string section.

You can recall a Subgroup at any time to solo a group of tracks. You can also recall a subgroup to select tracks for editing or Link operations. See the following section entitled **Recall Subgroup** for more on this topic.

Subgroup settings are saved and loaded with each song file.

*Example (Creating Subgroups);*

To create a Subgroup, first mute tracks which you do **not** want in the subgroup using any of the various Monitor/Mute commands described above. Next, hit **S**ubgroup (the <**S**> key) and you will see a window showing your current Monitor/Mute setting (to the right of "**M**"). The settings shown with labels 1 - 7 depict the current Subgroup settings. If a Subgroup hasn't yet been created for the current song, these will all show Track Maps with all tracks muted. Choose a Subgroup location from 1 - 7, type the number and the window closes. You've just created a Subgroup.

*Recall Subgroup <SHIFT-1> thru <SHIFT-7>:*

To Recall a Subgroup to the current Monitor/Mute selection, hold the <**SHIFT**> key and press the number of the Subgroup you wish to recall (1-7).

_ If you're not sure which Subgroup you wish to recall, you may view the Subgroups using the **S**ubgroup command. (To leave the **S**ubgroup window without storing a new Subgroup, hit <**ESC**>.)

Another very useful place where you can take advantage of your Subgroups is in any Track Map. A Track Map is a prompt which lets you select which tracks will be affected by an edit or Link command. To select a Subgroup while in a Track Map, simply press the Subgroup number (1 - 7). Note: **DO NOT USE THE <SHIFT> KEY IN THIS CONTEXT.** Whichever tracks were Monitored in the Subgroup will be Selected in the Track Map.

For a full description of all the different ways of selecting tracks in a Track Map, see the section entitled **Track Map Selection Keys**. One very powerful feature is to first select a Subgroup and then Flip <|> it (e.g. select a Subgroup of Drum Tracks and Flip, leaving all tracks **except** Drum Tracks).

*Example (Mute and Monitor Commands):*

Assume you have 3 tracks (A thru C) of drum sounds and the rest consist of bass, piano, etc. Let's suppose that you want to be able to solo the drum tracks as a group. Position to Track A by hitting <**;**> (semi-colon) followed by <**A**>. Solo Track A by hitting </> (forward slash). Move to Track B by hitting **>** or <**.**> (right angle bracket or period). Unmute Track B by pressing <**M**>. Move to Track C by hitting **>**. Unmute Track C by pressing <**M**>. You're now Monitoring the three tracks, A thru C. If you play the song or pattern now, you will hear only these tracks.

Now lets create Subgroup 1 using the current setting. Hit **S**ubgroup followed by <**1**>. While we're at it, lets create a second Subgroup that consists of everything **but** the drums:

Hit <|> (vertical bar) to Flip the current setting. All tracks except the drums are now Monitored. Hit **S**ubgroup followed by <**2**> to store this setting to Subgroup 2.

Now take a second to play with the new Subgroups. Press <*****> to turn on all the tracks. Hit <**SHIFT-1**> to solo the drums. Hit <**SHIFT-2**> to solo everything but the drums.

*See:* Link Mode, Track Map Selection Keys

*Definition:*

Punch-In/Out enables recording onto a track while playing back. Punch-In occurs by pressing <**R**> during **P**layback in Pattern Mode or in Link Mode if a Linear Pattern is designated. Pressing <**R**> again will enable you to "drop-out" of **R**ecord while continuing to play back. Pressing <**SPACE**> instead will simultaneously Punch-Out and stop playback. Pressing <**ESC**> while recording will stop recording and playback, but not keep what was recorded. Automatic, "hands-off" Punch-In and Punch-Out times may be programmed via the **AutoPunch** command (Number Key Command **2**).

*At A Glance:*

<**R**> (During **P**layback, Press <**R**> To Punch-In)
*(Enables Same-Track Recording during Playback)*
Hit <**R**> again or <**SPACE**> to Punch-Out

*Example:*

To quickly overdub (record over) data previously recorded on a track use the Punch-In command.

_ Press **P**lay and the track will start playing.

_ Press <**R**> to Punch-In and begin playing your synth at the region you wish to begin your overdub.

_ Hit <**R**> again when you come to the end of the region you wish to record over. The new material will be saved to the current track and the original performance will be erased between the Punch-In and Out spots.

*Comments:*

Punch in and out is a very fast and powerful feature which can save you lots of time. **U**ndo is there when you need it, so using manual punch in and out is not a risky business.

*See:* Autopunch, Loop, Record, Step Record

---

**AUTOPUNCH <2>**

*Definition:*

Autopunch allows user-programmable automatic Punch-In and -Out recording on the current track within the current pattern. AutoPunch is invoked by pressing Number Key **2**. The current AutoPunch settings (if enabled) are displayed in the lower left hand corner of the main screen directly below Quantize.

*At A Glance:*

```
2 AutoPunch
   Punch-In 1:00 / Out 1001:00 Change Settings/Enable/
      Disable
   Enter Letter >
```

*Example:*

Let's assume you've recorded a bass line on Track A of a pattern with an END of 33:00. You wish to punch-in on beat 3 and be out by the last sixteenth-note of beat 5. Press the Number Key <**2**> (AutoPunch). The following message will appear at the bottom left of your screen: **Punch-In 1:00 / Out 1001:00 C**hange Settings / **E**nable / **D**isable. Select **C**hange Settings. You will then be prompted for a **Begin** beat number from a new window at the bottom left of the screen. The displayed default value is beat **1:00**. In this example, type: **3** <**ENTER**>. Now you will be asked to provide an **End** for Punch-Out. You will have to provide the exact beat and subbeat that you wish to be out on. Since you want to Punch-Out on the last sixteenth-note of beat 5, type: **5:18** <**ENTER**>. To indicate that AutoPunch is enabled, the values you just typed will be displayed in the lower left window of the main screen after the **2 AutoPunch**. Now, to use AutoPunch, press <**R**> to playback the pattern. At beat 3, start playing the

master keyboard; Texture will enter **R**ecord and the information previously recorded on the current track will be muted. Texture will remain in **R**ecord until beat 5:18, replacing the data on the track between beats 3 and 5:18. AutoPunch will not record data you may have entered before or after your designated In/Out settings.

If you do not wish to keep the Punch-In, use the **U**ndo command which will restore the track to its previous state. If you wish to try another take, hit <**R**> once again.

| |
|---|
| Autopunch will stay enabled until you enter **P**lay. |

*Comments:*

AutoPunch is used to control punch-in/out times automatically when replacing data on a pre-recorded track.

Other ways of obtaining the same or similar results include manual punch in and out (see **Punch In/Out**), recording to a blank track and then blending it with the existing track (see <**F3**> Blend) and using the event editor (see <**F10**> Edit).

| |
|---|
| You may also use the <**2**> **AutoPunch** command to directly **E**nable or **D**isable **AutoPunch** without changing the current settings. |

_ **U**ndo will reverse the Autopunch command provided that no track data has been changed in Texture since the command was issued.

| |
|---|
| *See:* Punch In/Out, Blend, Edit, Record |

---

## PANIC BUTTON: ALL NOTES OFF <CTRL-A>

*Definition:*

<**CTRL-A**> sends out an All Notes Off command and a Controller Reset command over all MIDI channels and ports. This command allows the user to recover from such instances as "hanging" or "stuck" notes, or stray pitch bend information. If your system is properly configured you should rarely, if ever, need to use this command.

*At A Glance*

| |
|---|
| <**CTRL-A**> |

*Example:*

Hold down the <**CTRL**> key and press <**A**>.

| |
|---|
| *See:* Control Reset |

---

**JUMP <J>**

*Definition:*

The **J**ump command (pre-locate to start beat) allows instant playback with the <**P**> command.

When you press **P**lay in Texture there can be a slight delay before the tracks actually start playing. This is because the tracks must first locate the place in memory from where they are to start playing before they can actually begin to play. This delay can be a problem whenever instantaneous playback is necessary. Press <**J**> and the tracks will all locate their starting points in memory and the "**PbkReady**" sign (below "**BEAT**") will blink telling you Texture is ready to playback instantly as soon as the **P**lay is pressed.

*At a Glance:*

| |
|---|
| **J**ump<br>PbkReady *(Blinks)*<br>**P**lay *(For Instantaneous Playback)* |

*Examples:*

If you are using Texture to play sequenced parts in a live situation and need to start Texture right on the downbeat of a particular "measure", you may notice a slight delay that may throw the timing off if the **P**lay command is used. Instead, press <**J**> for **J**ump. This will pre-locate the tracks and turn on the blinking sign "**PbkReady**". This means that Texture is ready to go upon receiving the **P**lay command. Hit **P**lay on the downbeat and the sequence will start in perfect time.

The **J**ump command with the Metronome engaged is handy for duplicating tempo settings when creating sequenced versions of pre-recorded material. After selecting a **T**empo, play the recording, hit **J**ump and then (on a downbeat for example), **P**lay. You can adjust the tempo using the **Speed Offset** keys and repeat the process until it matches the tempo of the recording.

---

## CONTROLLER RESET <7>

*Definition:*

The Controller Reset command resets the values of three common MIDI Controllers on all channels when play or record is stopped. CtlReset is toggled on or off by pressing Number Key <**7**>. CtlReset will reset the sustain pedal, mod wheel, and the pitch wheel to prevent "stuck notes" or other "frozen" situations for these controllers. The status of CtlReset is displayed in the lower Left Window and is "backlit" when on.

When Enabled, **7 CtlReset** issues the following MIDI commands when play or record is stopped:

_ Mod Wheel is set to zero,

_ Sustain Pedal is set to zero (off),

_ Pitch Wheel is set to 64 (center).

Some MIDI instruments may interpret these commands in a manner that has an undesired effect (A Sequential Drumtraks equipped with MIDI tuning will re-tune itself when a Pitch Wheel command is received, for instance). If this is the case, simply leave CtlReset Off.

You may also use the <**CTRL-A**> (Panic Button) for manual triggering of an All Notes Off command for emergency situations.

*See:* Panic Button

*Definition:*

**5 TouchRcv** toggles a filter which traps Aftertouch events (also called Channel Pressure) before saving recorded data to a track. This filter also affects data accessed from the record buffer using the **B**uffer command.

The Touch Receive filter is toggled on/off by hitting key number <**5**>. The indicator **TouchRcv** is in the lower left window. The default setting is TouchRcv off (not backlit) which means aftertouch data will not be saved to track. To toggle TouchRcv on, hit key number <**5**> and the word **TouchRcv** will be backlit and aftertouch data will be saved to track when recorded or accessed from the Record Buffer.

*At A Glance:*

**5** TouchRcv
*Enables/disables Aftertouch (Channel Pressure) storage*

*Comments:*

Aftertouch data is not filtered out of the MIDI stream until after it has been stored in the Record Buffer. Therefore, if you accidently forgot to toggle TouchRcv on, you can retrieve the recorded data including the aftertouch information by using the **B**uffer command (assuming you haven't since recorded anything else).

If you want to filter or thin aftertouch or any other type of MIDI data after tracks have been created, use the Filter <**F9**> command.

The MIDI data recorded when Touch Rcv is enabled is very useful expressive information. However, because of the constant changes in values, this information eats up memory very quickly. Also, some synthesizers can't respond to this type of data. Therefore, if you don't need it, leave TouchRcv off.

*See:* Buffer, <F9> Filter, Thin

## TIMER MODE <CTRL-T>

*Definition:*

Found in the upper left window, the Timer/Clock displays either a running stopwatch or the Time-of-Day. There are two stopwatch modes: **E**lapse and **R**eset. The Timer/Clock select menu is accessed by holding down the <**CTRL**> key and pressing <**T**>.

_ **E**lapse Mode: When in **E**lapse Mode, the timer will start counting when you initiate record or playback, and stop when any stop command is invoked, or you reach the end of a pattern or song. When you initiate record or playback again, the timer resumes counting from where it left off. When you are in this mode a plus sign (+) is displayed to the left of the timer display. If you wish to reset the timer to zero while in **E**lapse Mode, hit <**CTRL-T**> followed by **Z**ero.

_ **R**eset Mode differs from **E**lapse Mode in that each time record or playback is initiated, the timer is automatically reset to zero. In this mode a left arrow will appear to the left of the timer display.

_ **T**ime-of-day Mode is the default mode and the display shows hours, minutes and seconds with **a** for AM and **p** for PM.

*At a Glance:*

<**CTRL-T**>
TIMER MODE: **E**lapse / **R**eset / **T**ime-of-Day (**Z**ero)
Enter Letter >

## BUFFER <B>

*Definition:*

The Buffer command allows access to Texture's Record Buffer so that Data from one or more recorded loops may be deposited or re-deposited in any track or pattern. Buffer is an Alpha Key Command that can only be used in Pattern Mode.

*At A Glance:*

| |
|---|
| When in Pattern Mode:<br>**B**uffer<br>*nnn* Loop(s) of *bbbb* Beats Recorded: Keep Which Loop?<br>Enter Value > |

*Example:*

Using **L**oop, record several "takes" on any empty track, then stop. The last loop recorded will be automatically written to the current track. Previous loops recorded may be accessed by pressing <**B**> for **B**uffer. The display window will tell you how many loops were recorded into the Buffer and prompt you to select a loop by number. Enter the loop number you want to keep, followed by <**ENTER**>. The contents of that selected loop will now be written to the current track, starting at the current beat 1:00. You may continue to select each additional loop recorded and save it to any track or pattern.

*Comments:*

When you record with Texture, all pertinent MIDI data your master keyboard generates is stored in a part of the computer's memory which the program calls the Record Buffer.

The Buffer is not cleared until the next record function (i.e. **Record**, **AutoPunch**, manual **Punch**) is invoked.

| |
|---|
| *Note: Upon bootup, Texture automatically allocates 1/5th of your computer's available RAM for a multi-purpose MIDI Event Buffer. One of the purposes of this buffer is to temporarily store incoming MIDI data, which is subsequently copied to the dynamic Record Buffer. This is a transparent process and is only a concern if you are running out of buffer space when recording. The maximum buffer size is 8190 MIDI events and can be adjusted by typing <**CTRL-B**> (see **Buffer Size**).* |

*Example (Accessing Quantized/Unquantized Versions):*

MIDI data in the Record Buffer is in its virgin state in as much as it has not yet been quantized and after-touch information has not been filtered. The following example describes one of the advantages of this.

If you have recorded a track with Quantize toggled on (see **Quantize**) and then decide you'd like to hear what you recorded without the quantization, first turn Quantize off by pressing <**1**>. Next access the **B**uffer and retrieve the take (loop 1) by typing **1** <**ENTER**>. Your original take will be re-deposited into the track without quantization.

> *Note: The Buffer is cleared every time you start **R**ecord. You can only take a track from the Buffer if you do so before **R**ecording anything else, otherwise it will no longer be there because new data will have taken its place.*

*See:* Buffer Size, Loop, Record, Quantize

---

## STEP RECORDING <CTRL-R>

*Definition:*

Step Recording is a means of entering and editing data outside of the real-time mode (clock running). Notes are played from the synth keyboard and the *record clock* is manually advanced or retreated.

*At A Glance:*

<**CTRL-R**>
STEP RECORD *(Bottom Left Window)*
    Begin at: *(Default Pattern Start Beat)*
    STEP REC  *(Right Window - Default Current Track)*
        <INS> record step
        <SPACE> stop (keep data)
        <BACKSPACE> backup one step
        <DEL> clear imput
        + - adjust duration
        [ TimeSlot *(Start Beat Default)* Dur: *(:06 Default)*]
        *(octave and pitch display)*

Use <+> or <-> to adjust duration, or the Function Keys for common preset duration values:

| | |
|---|---|
| <F1> = :02 | <F6> = :10 |
| <F2> = :03 | <F7> = :12 |
| <F3> = :04 | <F8> = :16 |
| <F4> = :06 | <F9> = :18 |
| <F5> = :08 | <F10> = :24 |

*Example and Comments:*

<**CTRL-R**> enables Step Recording. The user is prompted to enter the beat:sub-beat.tbu to **Begin at:** for starting record. The default value is the current start beat. You may override the default with any valid beat:sub-beat.tbu value.

_ Next, you will see the **STEP RECORD** window appear. At the top of the window is the track letter and name into which you will be step recording. Below that is the Step Record menu.

_ Below the Step Record menu is the **TimeSlot** value, which represents the current beat:sub-beat.tbu.

_ To the right of **TimeSlot** is the **Dur:** value which represents the duration of the notes that will be recorded. This value can be changed *on the fly* at any time during Step Record. The default is derived from the current Quantize Preset divisor if it has been set to any value. Otherwise, the default is **06** (normally a 16th note). Use the <+> and <-> keys to adjust the duration value or use the function keys <**F1**> through <**F10**> to accept one of the common presets (the chart above under ***At A Glance*** shows these values).

_ Beneath **TimeSlot** is a graphic representation of the notes on a keyboard with the letter names of the notes along the top and the octave values along the left side.

When a note or chord is played on the master keyboard up arrows are displayed under the coinciding note name and to the right of its octave value. For example, play a C2 or note 60 on your keyboard and it will be displayed as an up arrow directly under C on the top and to the right of the 2.

_ At the bottom is the current channel number and the Note number or letter and velocity value (only current while a note is being held on some keyboards).

## INSERT NOTES

Now, play notes, and then hit the <**INS**> key. Hitting the <**INS**> key causes the most recently played notes to be stored into memory with the current selected duration.

Use the <+> or <-> (plus or minus) keys or Function keys <**F1**> - <**F10**> to alter the default duration to the desired amount. Note-offs are generated for the note-ons 1 MIDI Clock prior to the beginning of the next time slot.

To insert rests, simply hit the <**INS**> key the appropriate amount of times to advance the clock.

## DELETE NOTES

If you've played a wrong note and have not yet hit the <**INS**> key you may clear the input pending in the note table buffer for the current time slot by hitting the <**DEL**> key. Play the correct notes and proceed.

## BACKUP

Use <**BACKSPACE**> If you need to backup one step. If you have already inserted the note and would like to backup you may do so by hitting the <**BACKSPACE**> key. Using the <**BACKSPACE**> key will 'backup' over the most recent step (wiping it out) and allow re-entering of the Note data or Function Key duration value. Remember that Texture won't let you backup more than one step.

## CANCEL

Use <**ESC**> if you want to abandon recording. This will cancel any data input during recording, exit the Step Record function and leave the destination track unaffected.

## STOP

Use <**SPACE**> or <**ENTER**> to stop recording. This will accept all data input up to the current time slot value. The recorded material will be treated as normal Punch-In data replacing only the data between the Step Record In and Out time boundaries on the destination track.

*Example (Tied Notes, Glissandos):*

Tied Notes and Rolled Chords can be created easily. If you want notes to be tied over 2 or more time slots, simply hold the note(s) down while you hit <**INS**> and let them up where you want them to end.

Create rolled chords and *glissandos* in this fashion:

Play the first note of the chord and hold the key down while you press <**INS**>. Then play the next note of the chord and hold it down and press <**INS**> again continuing to hold the first note down. Continue in this procedure until you have played all the notes of the chord (holding them down as you go) and when you reach the time slot where you want the chord to end, let up on the whole chord and press <**INS**> once more.

_ **U**ndo will also reverse the Step Record command provided that no track data has been changed in Texture since the command was issued.

*See:* Autopunch, Punch-In/Out, Record

*Definition:*

Event Chasing is sometimes desired when playback or recording is to be started from anywhere other than the beginning of a song or pattern. The Chase Events menu lets you select options for chasing and subsequent updating of various kinds of MIDI events. You can use this to make sure that your instruments are in the exact state they would be if had you started at the beginning of the song or pattern and played through to the current start beat.

> The term *Chase* refers to a reading through of the MIDI data starting at the beginning of the song or pattern and storing the pertinent information in a place in memory referred to as the **Chase Events Table** (**CET**) as it is read.

This process continues until the current start beat is reached. When Texture is finished chasing to the current start beat, the CET is sent or *transmitted* to your MIDI instruments, updating program and continuous controller information *before* playback or recording begins.

_ **In Pattern Mode**: Starting playback or record will cause all events to be chased from the beginning of the pattern to the current start beat (no chase if the start beat is "1:00"). The selected event types are stored in the CET, which keeps the most recent occurrence of a specific event type for each channel/port combination (you can view this table using the **C**hase Report and Test option, see below). The CET is then transmitted before play/record begins. Setting **D**elay will cause a "rest" before play to give your equipment a moment to adjust to any program changes that may have been issued. Using Texture's **J**ump command (see **Jump**) will also activate the chase and transmit, disabling Delay.

_ **In Link Mode**: Just like pattern mode except the chase includes events from all previous links in addition to events in the current pattern.

| |
|---|
| Muted tracks are not chased, including Link Mode Mute maps <F4>. |

In most cases, you can simply select **A**ll <**ENTER**> from the Chase Events Menu <**CTRL-C**> and proceed to use Texture as you normally would. Whenever you record or play, Chase Events will be in effect. There may be some cases where you wish to be more specific about what types of events are being chased, the size of the CET and/or set up a Delay Time. All of these are described in detail below.

*At A Glance:*

```
<CTRL-C>
   CHASE EVENTS
      Enable  All  None
      Programs
      Pitch Wheel
      After Touch
   Controllers:
      Modulation
      Breath
      Foot
      Volume
      Sustain
      Other

   maX Table Entries (Default)
   Delay Time (Default)
   Chase Report and Test
   <ENTER> or <ESC> when done
   >
```

*Comments:*

Starting at the top of the menu shown above, we'll examine the options one at a time.

**ENABLE**

**E**nable toggles Chase Events on and off. A check mark appears to the left of **E**nable when toggled on. If Enable is off, the chase is disabled even if you have specific items like Volume turned on. This lets you leave your specific settings intact while turning the chase operation on or off.

_ **A**ll turns on all the event types and a check mark appears to the left of each type. If Enable was off when **A**ll is pressed, Enable is automatically turned on.

_ **N**one deselects all types, but leaves the current status of Enable intact.

## PROGRAMS/MIDI EVENT TYPES

**P**rograms toggles enabling of MIDI Program events on and off. When off, Programs (sometimes called patches) are not chased.

The other MIDI event types listed (Pitch **W**heel, After **T**ouch, **M**odulation, **B**reath, **F**oot, **V**olume and **S**ustain) work the same way.

**O**ther enables/disables all Continuous Controllers not listed.

## MAX TABLE ENTRIES

The menu item "ma**X** Table Entries" lets you adjust the size of the **CET**.

> The **CET** is an area of memory where the most recent value of each unique event type is stored.

When Texture is reading through the MIDI data on a track, it looks for the event types that you have enabled for chasing. When it finds one, it checks the CET to see if there is an existing entry of the same event type that matches the channel/port routing of the current event. If such an event is already in the table, its value is updated, otherwise a new entry is created. You may view the CET (discussed below).

The default setting for ma**X** Table Entries is 100 events. This means that memory is reserved for 100 unique event types and is usually more than enough. If you are concerned that your CET is too small, you can simply **G**oto a **B**eat near the end of your song or pattern and run a Chase Test, described below. You may set ma**X** Table Entries to any number from 0 to 5000.

## DELAY

**D**elay Time sets the global Delay Time (in seconds). When using Internal Sync (see **Sync**), the Delay Time represents how long Texture will pause before playing. This allows time for the synths to set their MIDI programs before playback actually starts. To better understand this, here is a glimpse at the order things happen:

1. Texture is in stop mode.
2. You **G**oto a **B**eat within any link or pattern.
3. You hit **P**lay.

4. Texture transmits Default MIDI Programs (see **Assign Default Programs**)
5. Texture reads through the MIDI data leading up to the current beat, creating the CET.
6. Texture transmits the CET to your various MIDI devices.
7. Texture pauses for Delay Time.
8. Playback begins.

The key point in the above sequence of events is that playback begins abruptly after the CET is transmitted if Delay Time is set to zero. Assuming that the CET contains some program changes, we know there will be no time for the MIDI devices to switch programs before playback starts. This may lead to some "hiccuping" on the part of certain MIDI devices.

_ If you set **D**elay Time to 1 second or more, Texture will pause for the specified number of seconds after transmitting the CET before starting playback.

_ If you hit **J**ump before **P**lay, steps 1 through 6 happen in response to the **J**ump command, step 7 is omitted and step 8 happens when you hit **P**lay.

The global Delay Time can also be set from **Assign Default Programs** and the SMPTE Options menu. When used with external sync modes, the global Delay Time takes on other responsibilities as well (see **Sync**).

## REPORT AND TEST

**C**hase **Report and Test** is usually used to troubleshoot any problems you might be having with the Chase Events function or simply to find out the status of various controllers at a given point in a song or pattern.

The way to use this command is to first locate to a particular place in a pattern or link, then <**CTRL-C**> for the Chase Events Menu followed by **C**hase **Report and Test**. In most cases you will see a prompt like this:

| |
|---|
| CHASE Successful *(nnn Entries)*: **V**iew Table / **T**ransmit Table / **D**one<br>Enter Letter ><br>*(Where nnn is the Number of table Entries)* |

In the above prompt, if your **Max Table Entries** was too small, the word **Successful** would instead read **OVERFLOW!**. In this case you would

want to increase ma**X** Table Entries. In any case, you can now **V**iew the CET, **T**ransmit it or simply choose **D**one to return to the CHASE EVENTS menu.

_ The Chase Events settings are stored with each song file.

> Note: If you experience a problem with a particular MIDI device on CET transmission, see the option **Txslowtrans** under **DOS Environment Variables**.

*See:* Assign Default Programs, DOS Environment Variables, Sync

---

## DELAY TIME

*Definition:*

Delay Time represents the number of seconds that Texture will wait before playback. Delay Time has a few "strings attached" that will enable or disable it in certain situations.

The Delay Time parameter can be set from two or three different menus in Texture depending on your hardware setup. It can be set from either the **A**ssign **D**efault MIDI Programs menu or the <**CTRL-C**> Chase Events menu. If your system supports the <**CTRL-P**> SMPTE/Time Code Settings menu, it is also available there.

Delay Time is a global value in Texture. This means that when you change it in one context (such as the **Assign Default MIDI Programs** menu) it changes in other contexts as well (such as the **Chase Events** menu). This is not a mistake or oversight. The Delay Time setting will work intelligently depending on what you are doing at the time. In general, you should be able to set it once per song and leave it alone.

*At A Glance*

**A**ssign
  Assign: **C**hannel / **P**ort / **D**efault Program
  Enter Letter > **D**

```
DEFAULT MIDI PGMS
    pOrt (Select Port for Program Assignment)
    Channel (Select Channel for Program Assignment)
    Program (Select Program Number: 0-127 or -1 for "none")
    Send On Play/Rec (Toggle On/Off:
        Send Table Play/Rec Start)
    Delay Time (Global Delay Setting, see "Delay")
    Transmit All (Send Default Program Table via MIDI)
    tRansmit This Pgm (Send This Program via MIDI)
    cLear All (Clear the Default Program Table)
```

```
<CTRL-C>
CHASE EVENTS
    Enable  All  None
    Programs
    Pitch Wheel
    After Touch
Controllers:
    Modulation
    Breath
    Foot
    Volume
    Sustain
    Other
maX Table Entries (Default)
Delay Time (Default)
Chase Report and Test
<ENTER> or <ESC> when done
>
```

## ASSIGN DEFAULT MIDI PROGRAMS

If **Send On Play/Rec** is toggled **ON**, Texture will pause for the number of seconds designated by Delay Time before Play or Continue are invoked. Using **J**ump will override this feature. Delay Time is used here to give your synths time to adjust to program changes that are sent using this feature. Turning **Send On Play/Rec** to **OFF** disables the delay if it is not being invoked by **Chase Events** or an external sync mode.

## CHASE EVENTS

The use of Delay Time is similar when <**CTRL-C**> Chase Events is enabled. Texture will pause in the same manner as described above, for

the same reason. When Chase Events is enabled, you are updating your synths with possibly several different types of MIDI information which they may need time to respond to before they are ready to play.

> *Note: If both of the above are toggled on, the delay is not cumulative, a Delay Time of 1 second will result in a 1 second delay, not 2.*

*Comments:*

Delay Time also has a very important role when using external sync and locating to MIDI Song Position Pointer, SMPTE or MIDI Time Code. Please refer to the chapter on Synchronization and any applicable appendices for a complete description of Delay Time in this context.

*See:* Assign, Chase Events, Synchronization

---

## KEYMAP FILE FUNCTION <CTRL-K>

*Definition:*

You can create a simple text file that Texture can read as a *Keymap File*. Texture will load this file on command (<**CTRL-K**> followed by **L**oad, <filename> and <**ENTER**>) and affect the playback of MIDI data based on the information in the Keymap file. Texture will automatically load any Keymap file in the current directory which has the same name as a song file (minus the file extension) when the song is loaded. Keymaps can be used to re-route MIDI note assignments, transpose tracks, scale the velocity of tracks and re-direct output port routing.

*At a Glance:*

```
<CTRL-K>
   KEYMAP (filename or ...): Clear / Load
   Enter Letter >
      Load
      Enter keymap filename: >
```

*Comments:*

A text file can be created in one of several ways, all of which involve leaving Texture temporarily by either exiting the program <**CTRL-X**>, or using the DOS Command Shell <**CTRL-D**> or the e**X**ternal command (under the **F**ile Menu). Text file creation and/or editing is discussed a bit further below, but first let's examine what a Keymap looks like and does:

There are several functions that can be accessed via the Keymap file which will affect the playback of MIDI data.

## KEYMAP FUNCTION

First lets take a look at the primary function: **keymap**. This was designed to allow the use of a different drum or percussion module to be substituted without changing any data in the song or pattern file. If you had to swap drum machines for a few days while your normal one was in the shop, this would be a life-saver. As we detail the contents of a Keymap file, keep in mind that commands and data can be entered in upper or lower case characters.

*Example:*

To use this function, your Keymap file should contain a line beginning with the word `keymap`, followed by a list of which tracks you wish to affect and an optional comment. Comments can optionally be placed at the end of any line in the Keymap file and are designated by the character **;** (semi-colon). This **keymap** heading tells Texture that a map of key re-assignments follows. Here's an example of the **keymap** heading:

```
keymap a d f g        ;this is the keymap heading
```

The above heading tells Texture that the tracks a, d, f, and g should be affected by the keymap which follows. The next line(s) will detail the note substitutions using the syntax: <old note>:<new note> [;<comment>]. Continuing our example:

```
keymap a d f g       ;this is the keymap heading
C3:C2                ;kick drum
D3:E3                ;snare drum
F4:C5                ;low tom
A4:D5                ;mid tom
C5:F5                ;hi tom
end
```

_ Notice that in the above example, after the note substitution lines, is a line which contains one word: **end**.

The **end** statement tells Texture that the **keymap** portion of the file is finished.

## OTHER KEMAP FUNCTIONS

All other functions which can be accessed from the Kemap file take the form of single line statements. The supported functions are: **transpose**, **velocity**, **port2port**, **chan2port** and **track2port**.

## TRANSPOSE FUNCTION

The Transpose function will transpose specified tracks on playback. The syntax is:

**transpose** <# semitones> <track(s)>.

The <# semitones> parameter tells Texture how many half steps to transpose the indicated track(s) on playback. In other words, **-12** will transpose a track down one octave. Use the <track(s)> parameter to designate which tracks to affect. Here's an example:

```
transpose 12 d e f   ;trans.trks d,e&f up 1 octave
```

_ Notice, as in the **keymap** function, the semi-colon denotes the beginning of a comment.

## VELOCITY FUNCTION

The Velocity function scales note velocity on designated tracks. The syntax is:

**velocity** <% to multiply velocities by> <track(s)>

Here's an example:

```
velocity 120 f g ;scale vel.on trks f&g by 120%
```

It is not a good idea to use velocity scaling in a Keymap file any more than you need to as the overhead incurred during real time playback can overwhelm the system. Of course, if you have a very fast computer it shouldn't pose any problem.

## PORT FUNCTIONS

*Port2Port, Chan2Port and Track2Port:*

These commands all re-route MIDI data to a specified port. These can be extremely useful if you have a live setup that has fewer ports than your studio setup or vice versa. They can (in other words) aid you in accommodating more than one port configuration without changing your song or pattern files. Use a separate command for each track, channel or port to affect.

**Port2Port**: Port2Port will cause playback on any track assigned to port "old" to be re-routed to port "new". The syntax is:

**port2port** <old port> <new port>

Here's an example:

```
port2port 1 2   ;re-route port 1 tracks to port 2
```

**Track2Port**: Track2Port will cause a specified track to be routed to a specified port. (Note: this command takes precedence over port2port if there is a conflict). The syntax is:

track2port <track> <port>

Here's an example:

```
track2port C 1   ;route track c to port 1
```

**Chan2Port**: Chan2Port will cause any tracks that have a channel assignment of <channel> to be routed to <port>. (Note: This command takes precedence over port2port if there is a conflict). The syntax is:

```
chan2port <channel> <port>
```

Here's an example:

```
chan2port 13 2 ;route trks assigned to channel 13
to port 2
```

You can combine any of the above commands in any order to form a complete Keymap file. The file name should always include the extension **.km** (e.g `newdrums.km`).

## TEXT FILE CREATION

It is beyond the scope of this manual to detail all the different tools you could use to create and edit text files. A simple notepad program is all you need (Borland's **Sidekick** comes to mind as a handy tool in this case). Most word processors have a "text only" or "ascii" mode which you can use to create or edit a text file. DOS v5.00 comes with a full-featured text editor called **EDIT** and all versions of DOS come with a bare bones line editor called **EDLIN**. Even without these tools you could create a Keymap file by using the DOS **COPY CON** command. **COPY CON** will not allow you to edit a file, but you can easily create a Keymap file from scratch using it:

```
copy con newdrums.km <ENTER>

keymap a d f g <ENTER>
C3:C2 <ENTER>
D3:E3 <ENTER>
F4:C5 <ENTER>
A4:D5 <ENTER>
C5:F5 <ENTER>
end <ENTER>
<CTRL-Z> <ENTER>
```

In the example above, the first line creates the file `newdrums.km` in the current directory. The lines that follow are simply typed in and terminated by hitting <**ENTER**>. When you've typed in all the lines you need, press <**CTRL-Z**> followed by <**ENTER**> to close the file. To view this file, you can issue the command: `type newdrums.km`.

## LOADING & CLEARING A KEYMAP FILE

To manually load a Keymap file into Texture, hold down <**CTRL**> and press <**K**>. At the **KEYMAP <...>: C**lear / **L**oad prompt, choose **L**oad and then type the name of the Keymap file, minus the file extension (e.g. `newdrums`) followed by <**ENTER**>. When loading a Keymap file manually, it must be in the current directory. If a Keymap file is already loaded into memory, its name appears in the prompt after the word **KEYMAP** when you hit <**CTRL-K**> (e.g. **KEYMAP <newdrums>: C**lear / **L**oad). When a new Keymap file is loaded, the old file, if present, is cleared from RAM memory.

To clear a Keymap from memory, choose **C**lear at the <**CTRL-K**> induced prompt.

*To Load A Keymap File With A Song File:*

To have Texture load a Keymap file automatically with a song file, give the Keymap file the same name as the song file (except for the file extension) and store it in the same directory which contains the song file. Load the song and the Keymap file will load with it. You can check to see if it's there by hitting <**CTRL-K**>. The title of the Keymap file should appear in angle brackets to the right of the word **KEYMAP**. Remember, all Keymap files must have the extension **.KM**.

If you load a song that does not have a corresponding Keymap file, the previous Kemap in memory (if one exists) is kept. This is very useful if you want to load many songs and leave a Keymap in place. Remember that you must explicitly Clear the Keymap when loading a new song if you don't want it to affect the new file.

*Note: These options will NOT have any effect on sound output during MIDI data display editing, event chasing, MIDI thru modes or default MIDI program transmission. In other words, use this option for playback only.*

*Comments (When To Use Keymaps):*

Before trying to solve a particular problem with a Keymap file, consider the following:

All Keymap functions affect MIDI data during real-time playback.

This can result in additional overhead for your computer while it is performing your music. With today's 286, 386 and 486 processors, this is rarely a problem. If you don't like the idea of giving your machine extra work during playback, you can probably make the necessary changes to your files ahead of time using the **Global Edit** features in Texture. Keep in mind that the greatest overhead increase is generated by Keymap's *velocity* command; *keymap* and *transpose* are fairly harmless and the port functions create no extra overhead.

Keymaps are best used as temporary "filters". If you want to permanently change something, we advise using one or more of the many editing tools Texture provides.

*See:* Global Editing <CTRL-G>

# CHAPTER 7
# FILE MANAGEMENT AND DOS


- Overview 1
- Exit Texture <**CTRL-X**> 1
- File <**F**> 2
- Drive 3
- Erase 3
- File Browser 3
- Load 4
- Midi Files 4
- New 4
- Path 5
- Quicksave 6
- Save 6
- eXternal 8
- Drive 9
- File Browser 9
- Standard MIDI Files 12
- Saving 12
- Naming 13
- Loading 13
- Quick Save 14
- External 15
- DOS Command Shell <**CTRL-D**> 16
- DOS Environment Variables 17
- txhelp 17
- txsound 17
- txslowtrans 18
- Command Line Switches 19
- Video Mode 19
- MPU-401 20
- CMS UART Ports 20
- Batch Files 20
- Autoexec.bat 21

*This chapter discusses how to load and save files in Texture. Also included are ways to run other programs and DOS commands without leaving Texture, Standard MIDI File implementation, DOS Environment Variables and related issues.*

---

## EXIT TEXTURE <CTRL-X>

*Definition:*

<CTRL-X> is used to exit Texture and return to the computer's disk operating system (DOS). You will be logged on to the last active drive/directory you were using from within Texture. <**CTRL-X**> is invoked by holding down the <**CTRL**> key and pressing <**X**>. As an added safety feature we have included a **S**ave **/ A**bandon **/ <ESC> to Cancel** prompt to protect against accidental loss of the current song in memory by exiting too hastily.

The **S**ave option saves the current song to disk using the current file name, then exits Texture. **A**bandon exits Texture with no file save. <**ESC**> cancels the exit procedure and leaves Texture running.

*At A Glance:*

```
<CTRL-X>
   EXIT File (Current File Name) Save / Abandon / <ESC> to Cancel
   Enter Letter >
```

*Comments:*

After exiting to DOS, it's a good idea to back-up your most recent files. Refer to your computer's DOS manual for details on how to do this using the DOS file Copy command or Backup utility.

*Definition:*

The **F**ile option provides a menu of commands which deal with file access. **F**ile is an Alpha Key Command that can be invoked from either Pattern or Link Mode by hitting the <**F**> key.

*At A Glance:*

**F**ile
FILE Commands Menu
  **D**rive
    Default DRIVE Enter Letter >
  **E**rase
    ERASE File: **S**ong or **P**attern? Enter Letter >
    Name of File To Erase >
  **F**iles
    [FILES: Directory Search]
    DOS Filespec > *(Current Directory and File Spec)*
    FILE Browser
  **L**oad
    LOAD File: **S**ong or **P**attern Enter Letter >
    **S**ong
      LOAD Song File >
    **P**attern
      LOAD Pattern File >
      Load Setup and Track Assignments?
      **Y**es / **N**o >
  **M**idi Files
    MIDI File: **L**oad or **S**ave? Enter Letter >
    MIDI File Name: >
    Format **0** or **1** Enter Letter >
  **N**ew
    FILE New: All song data will be lost! Are you sure?
    **Y**es / **N**o >
  **P**ath
    PATH: Change to New Directory *(Current Path)*
    [Browse Files]
  **Q**uick Save

**S**ave
SAVE File: **S**ong or **P**attern Enter Letter >
SAVE File: *(Current Name)*
File Exists, Overwrite? **Y**es / **N**o (Conditional)
SAVE (Pattern/Song File) *(Current Song/Pattern)*
e**X**ternal
External Program > *(Filename)*
*(program runs, then...)*
Any Key to Continue

*Comments:*

The **F**ile menu contains commands essential for Texture file access and maintenance.

There are also many ways you can manipulate your Texture files directly from the DOS environment and it is strongly recommended that you familiarize yourself with the basic file commands detailed in your DOS manual if you haven't already done so. The commands BACKUP, CHDIR (CD), CHKDSK, COPY, DELETE, DIR, FORMAT, MKDIR (MD), PATH, RMDIR (RD), RENAME, SORT, and XCOPY are powerful (and occasionally dangerous) DOS commands which can help you organize and backup your work.

## DRIVE

**D**rive enables you to "log-on" to a new drive. All you need do is to type the letter of the desired drive. Texture will make the new drive the default and bring up the File Browser (see below) in the Right Window. See the section on **Drive** in this chapter.

## ERASE

**E**rase deletes either a Song or Pattern file within the current directory. Type the appropriate filename (without the three letter extension .SNG or .PTN) and press <**ENTER**>. Note that erased files can not be restored with the **U**ndo command. Also, in order to erase files with an extension other than .SNG or .PTN, you must exit to DOS and use the ERASE or DEL commands.

## FILES (FILE BROWSER)

See the section below on **File Browser** in this chapter.

## LOAD

The **L**oad sub-command loads either a Song or Pattern file into Texture. Note that you cannot load files that have not been created by Texture using this command (Standard MIDI files are loaded using the "**M**idi Files" sub-command).

When you are prompted to enter the name of the file you wish to load, you may include a disk and/or directory path before the file name if you choose.

_ Loading a Song will clear Texture of all traces of the old Song as well as automatically load the new Song's Setup and Track assignments.

_ Loading a new Pattern will erase the current Pattern and replace it with the new one. The MIDI data in other Patterns remains intact. You are prompted: **Load Setup and Track Assignments?**, which lets you choose to keep your current Setup and Track information or instead, load the information stored with the pattern you are loading.

## MIDI FILES

**M**idi Files lets you either load or save Standard Midi Files (SMF's) in formats 0 or 1. For more information on loading and saving SMF's please refer to the section entitled **Standard MIDI Files** in this chapter.

## NEW

**N**ew is used to clear all song and pattern data from Texture's memory so that you may start composing afresh. All song data, pattern names, track names and assignments will be cleared.

Many users find it advantageous to create a start-up song or pattern which contains their personal "default" track names, assignments, timebase, quantize settings, etc. If you wish to do this, take a song that is set up the way you wish and **Z**ap all patterns. Save the song as "setup" or whatever you wish. Now, instead of using the sub-command **N**ew to start a new song, load the setup songfile.

*CAUTION: Clearing the entire Song Memory results in the loss of all Pattern, Link and Track data. Using **U**ndo following **F**ile **N**ew will have no effect. Make sure your current song in memory has been saved to disk before activating this command.*

## PATH

**P**ath lets you change the current active directory on the current drive. The active drive and directory are displayed when you call up the path command. After you type in a new path, the File Browser is activated so that you may view and/or select a file to load.

*Note: When using floppy disks, you will probably not need to set up different directories on a given disk. However, if you have a hard disk, you will find directory organization essential. Check your DOS owner's manual to find out more about the advantages of tree-structured directories.*

*Example (Path):*

Assume you have a directory on drive **c:** called `\tx\songs` and you are currently in another directory on drive **c:**. To change the current active directory to **c:\tx\songs**, press <**F**> to invoke the **F**ile menu. Press <**P**> to select the **P**ath option. Type `\tx\songs` after the **C:** prompt and press <**ENTER**>. A file browser is displayed and you could choose a file to load from it at this time or hit <**ESC**> to return to the File Menu. You can now load and save files to this directory without having to precede the file name with the directory path.

*Comments (Path):*

When you use the **P**ath command, the Directory refers to a file organizing tool provided by DOS. Essentially, DOS lets you divide the space of a disk into different work areas called directories and sub-directories.

You may save entirely different files to each directory.

This is helpful because you can name one directory, say, NEWIDEAS, and another FILM, saving files relevant to each task category under each directory.

For more information, read the sections on path names and tree-structured directories in your DOS manual. Also, keep in mind that you can do many DOS chores such as creating and removing directories without leaving Texture by using the <**CTRL-D**> (DOS Command Shell) command.

_ Unlike some programs, you can change directories in the DOS Command Shell and the directory change will tie over to subsequent file operations in Texture.

> If you simply want to load or save a single file to another directory or drive, you can just precede the file name with the directory path (e.g. **F**ile, **L**oad, **P**attern, `d:\grooves\samba` <**ENTER**>).

## QUICK SAVE

**Q**uick Save saves the current song file using its current name with no questions asked. If a file with the same filename already exists, it will be over-written with the current file. Use this command to frequently save work in progress.

> *WARNING: You will not get the "File Exists, Overwrite?" warning when using the Quick Save command.*

## SAVE

**S**ave lets you store either a complete song or pattern to a disk file. When you **S**ave a **S**ong, the entire current working environment of Texture is saved to disk, including all links and active patterns as well as all setup parameters (Metronome, Quantize, Timebase, etc.) and track assignments.

> A pattern is defined as active if it meets at least one of the following conditions:
>
> _ One or more Tracks contain MIDI Data, OR
> _ It has been Named via the **N**ame command, OR
> _ It has been assigned to a Link.

If you are trying to save a file with a name used by a file already on the disk, Texture will prompt you: **File Exists, Overwrite?** If you answer **Y**es the disk file will be replaced with the new file. If you answer with any other key, you will exit the File Command.

*Example (Save a Song):*

To save a song file to disk, press <**F**> to invoke the **F**ile Commands menu, then <**S**> for **S**ave. You will be prompted: **SAVE File: S**ong or **P**attern**? Enter Letter >**. Press <**S**> for Song. You will now be asked to give the file a name (the current song will be the default in this prompt). Hit <**ENTER**> to select the current default or type in any allowable eight-character filename you wish and press <**ENTER**> when done. Some characters, including spaces, are unacceptable under Texture because they are also illegal in DOS filenames. If you enter illegal characters you will be prompted: **Illegal Characters in Name, Any Key to continue**. If the file has previously been **S**aved to disk you will see the message **File Exists, Overwrite? Y**es / **N**o >. If you want to keep your old song as is, and **S**ave this version to another name, hit **N**o or <**ESC**>. If you wish to **S**ave all new changes made to your song since you last **S**aved, hit **Y**es.

*Example (Saving A Pattern):*

Patterns are saved the same way as songs in the above example. To save a pattern press **F**ile, **S**ave, **P**attern. At the **SAVE Pattern File:** prompt rename or accept the existing pattern name and hit <**ENTER**>. This is handy for exporting a pattern from one song and importing it into another.

*Example: Saving To/From Different Drives:*

If your default drive is C: and you would like to save a copy of the same song to the disk in drive B: type `B:name` <**ENTER**> at the **SAVE Song File:** prompt.

*Comments:*

Texture automatically adds the extension **.SNG** to song file names and **.PTN** to pattern file names. You can type these in yourself if you like, but don't use any substitute file extensions as Texture will only load files with these extensions as songs or patterns (see the section on Standard MIDI Files for the only exception to this rule).

In Texture, legal filenames follow the DOS rules and may contain from 1 to 8 characters, but may not include any spaces or any of the other key symbols disallowed by DOS. Consult your DOS manual for more details. Texture will let you know if you enter illegal characters in the name.

When **S**aving a **S**ong, all Links up to and including the Last Link set are saved. In addition, all active patterns are saved. An active pattern is any pattern that contains MIDI data, has been <**F1**> assigned to a link or has been **N**amed.

All tracks, patterns, links and environment settings currently in effect (except for monitor muting and loop status) are **S**aved with either a Song or a Pattern file.

> *NOTE: SAVE TO DISK OFTEN!!! If you're smart, you'll get into the habit of saving to disk after recording any new track or pattern or setting Song Links. The reasons are obvious: if the power to the computer is interrupted or if the program crashes, whatever was not stored to disk is lost. Forever.*

After a session, always copy all your work files to a backup disk from DOS. If you follow the above procedure or something close to it, you minimize the risk to your data.

## EXTERNAL

e**X**ternal allows you to run another program with a .EXE or .COM extension on top of Texture. See the section entitled **EXTERNAL** for more information about this command.

> *Note: There are two types of Texture files: Song Files and Pattern files. Texture automatically assigns either a .SNG or .PTN extension to each, respectively. Only Texture or Texture compatible files can be loaded into Texture with the* **L***oad sub-command or via the File Browser. Standard MIDI Files are loaded using the MIDI Files sub-command. If a Texture file is renamed under DOS with something other than a .SNG or .PTN extension, you will not be able to load it into Texture until it is renamed again, with the appropriate extension restored. When you are asked for a Song or Pattern name, it is not necessary to include the extension .SNG or .PTN in the name, e.g. type* `brand3` *instead of* `brand3.sng`*.*

*See:* DOS Command Shell, Drive, eXternal, File Browser, Standard MIDI Files

## DRIVE

*Definition:*

A sub-command from the **F**ile menu, **D**rive enables you to log on to a new disk drive on your system. The active drive is called the default drive and, unless otherwise specified, all file commands will use this drive.

*At A Glance:*

| |
|---|
| **F**ile<br>  **D**rive<br>  Default DRIVE Enter Letter > |

*Example:*

To load song or pattern files from a drive other than the currently active drive, press **F**ile, followed by **D**rive. Type the letter of the disk drive you wish to log on to (e.g. **b**). You will be logged on to the new Drive. A list of the contents of the current directory will be displayed and you can cursor to a song or pattern file, then hit <**ENTER**> to load the file or simply hit <**ESC**> to return to the **F**ile sub-menu.

*Comments:*

The default drive may temporarily be overridden simply by including the name of the drive in the filename when requested by a File sub-menu command. For instance, if your active drive is **B** and you wish to run the program BEAMUP.EXE which is located on drive **A**, type **F**ile, e**X**ternal and, at the **External Program** prompt, type `a:beamup`. DOS will load **BEAMUP.EXE** but the default drive will still be drive **B**.

| |
|---|
| *See:* Drive, External, File |

## FILE BROWSER

*Definition:*

**F**iles, the sub-command of **F**ile, accesses the Texture File Browser. The browser will allow you to view the existing files in the disk/directory of

your choice and, navigating with a *hibar*, position to a file and hit <**ENTER**> to load it.

*At A Glance:*

**F**ile
  **F**iles
  **DOS Filespec *.** *(Files Directory)*
    FILE Browser
    <cursor keys> to scan
    <ENTER> to load
    <ESC> to exit

*Note: To load a song or pattern directly from the browser, it must be a .SNG or .PTN file. Standard MIDI File (usually with the extension* ***.MID****) loading is not supported from the browser as of this writing. To load or create a Standard MIDI File use the* ***M****idi Files sub-command from the* ***F****ile Menu. See the section entitled* ***Standard MIDI Files*** *for more on this subject.*

*Comments:*

When you issue the **F**iles sub-command, a window with the title **FILES: Directory Search** pops up. You are prompted to enter the **DOS Filespec** to use for the file search. The default is ***.sng**. The asterisk ***** is a DOS *wildcard* character which in this case means that any file with the extension **.SNG** in the current directory will be included in the search (see your DOS manual for more information on the use of wildcards).

If you wanted to look for a song in another disk or directory, you would type the full path after the prompt, for example: `d:\texture\work\*.sng`. For a search of **pattern** files in the same directory: `d:\texture\work\*.ptn.`

After entering a filespec and hitting <**ENTER**>, Texture displays a File Browser.

_ At the very top of the Right Window, you will see the filespec you selected.

_ Just underneath this, you will see the amount of free disk space (in kilobytes).

_ The rest of the right window is filled with a scrollable list of file names including size, date and time that the file was created.

_ You can move the *hibar* using the cursor keys (including <**UP**> and <**DOWN**> arrows, <**HOME**>, <**END**>, <**PgUp**> and <**PgDn**>)

_ Hit <**ENTER**> to load the highlighted file into Texture.

_ Use <**ESC**> instead of <**ENTER**> if you don't wish to load any of these files.

The browser can browse up to 128 files at a time. If there are more than 128 files to browse that match your filespec, Texture will let you browse these files in groups of 128 files at a time.

*Example:*

You would like to find out what files are in the current directory on the disk in the default drive. Press **F**ile to invoke the File Menu. Choose **F**iles, type ***.*** at the **DOS Filespec** prompt and hit <**ENTER**>. A directory listing will be displayed in the Right Window. You may then use the cursor keys to move around in the directory.

*Example:*

You'd like to see the names of all the files on Drive B that end with the extension **.EXE**. You can specify a Drive over-ride plus match "*wildcard*" characters in response to the **DOS Filespec** prompt like this: `b:*.EXE`. Texture will display all files in the current directory of drive B with the file extension **.EXE**.

*Example:*

If you wanted to see all song files that started with the letter R you could type `R*.sng` <**ENTER**> at the **DOS Filespec** prompt. Consult your DOS manual for a complete description of wildcard usage.

*See:* File, DOS Command Shell

*Definition:*

Texture supports the reading and writing of Standard MIDI Files (SMF) in formats **0** and **1**. The "**M**IDI Files" option is available from the **F**ile <**F**> Menu. You may choose to **L**oad or **S**ave an SMF.

*At A Glance:*

```
File
   Midi Files
   MIDI File: Load or Save? Enter Letter >
      Save
         MIDI File: Song or Pattern Enter Letter >
         MIDI File: Format 0 or 1 Enter Letter >
         MIDI File Name: (Enter Name)
      Load
         MIDI File Name: (Enter Name)
```

## SAVING

You may save either a single pattern or a song to an SMF.

If you choose to save a pattern, the current pattern will be saved. If you choose to load an SMF, it will be loaded into the current pattern.

> Patterns must be assigned to Texture links in order to be saved as part of a song when creating SMF's.

When Texture saves a song to either of the SMF formats it splices all the linked patterns into one linear sequence.

_ Format **0** merges all Tracks into one large track retaining the MIDI channel assignments within that track.

_ Format **1** retains separate tracks.

When saving a song to SMF (**F**ile, **M**idi Files, **S**ave, **S**ong), Texture recreates the song just as it would be played in Link mode with only one exception: *relative tempo changes*. Link transposition, repeats, all mutes

(**including monitor mutes!**), and the linear pattern are all taken into account when creating an SMF.

> *Note: When Texture saves a pattern to an SMF, the Save window does not display the pattern numbers while it is saving as it does when saving a Texture Song file. since there is a considerable amount of processing being done during this procedure it may appear that the program is locked or frozen. This is especially true with large files on standard 4.77 Mhz machines, notably when saving to floppy. The program is simply processing the data and the window will disappear when the file has been saved successfully. Be patient.*

*SMF File Extensions:*

Texture recognizes **.MID** to be the default file extension for SMF's. When saving an SMF, Texture will automatically add this extension for you if you don't supply an extension yourself. If you want to save the SMF without an extension, simply add a period (**.**) to the end of the file name. The reverse applies for loading SMF's.

## NAMING

For both loading and saving SMF's, Texture will perform the following translations with regard to the default file extension: **MID**.

| USER TYPES | TEXTURE TRANSLATES TO |
|---|---|
| `brand3` | brand3.mid |
| `brand3.` | brand3 |
| `brand3.mid` | brand3.mid |
| `brand3.std` | brand3.std |

## LOADING

When loading a type **1** SMF created by Texture into other applications, it may be loaded into tracks starting at track 2 instead of 1.

This means that Texture's track A is now in slot 2, B in 3, etc.. This is because Texture writes a *conductor* track (with only one tempo event; the master tempo) before writing the other tracks, This track won't usually be

interpreted as a separate MIDI data track, but the treatment may vary from one application to another. In previous versions of Texture, this wasn't done and some applications would actually throw away Texture's first track expecting the conductor track first. (By the way, it is anticipated that Texture will *grow* a conductor track in the near future, at which time we will write it to the SMF.)

When importing an SMF, Texture will toss empty tracks, so as not to run out of tracks unnecessarily.

_ If the track starts with a single channel assignment Texture will automatically inherit the assignment.

_ Texture will also inherit the SMF's stated timebase if it matches one of Texture's timebase choices. If not, Texture will ask you if you wish to continue loading the SMF with Texture doing its best to convert it.

> *CAUTION: When you load an SMF, the **Timebase** is automatically set to the value of the timebase of the imported file, as are the tempo, track names, etc.. If you wish to return these setup parameters to their value before having loaded the SMF, save any pattern to disk first, then reload it after the SMF has been loaded, answering **Y**es to the prompt: **Load Setup and Track Assignments?**.*
>
> *Note: As of this writing, there is still no SMF Meta Event to designate a track's port assignment.*

*See:* File, Save

---

## QUICK SAVE

*Definition:*

The Quick Save command is a quick way to save the current file with two simple keystrokes. Access the File menu by hitting <**F**> followed by <**Q**> for **Q**uick Save. This command is equivalent to the "**F**ile, **S**ave, **S**ong, (**Y**es)" command sequence.

*At A Glance:*

| |
|---|
| **F**ile<br>FILE Commands (Window Left Screen)<br>**Q**uick Save |

*Comments:*

If the file exists already you will not receive a **File Exists, Overwrite?** warning and will automatically overwrite the existing file. Be sure to use this command only when you are positive that it is what you want to do.

| |
|---|
| *See:* File, Save |

---

## EXTERNAL

*Definition:*

A sub command from the **F**ile Menu, e**X**ternal allows programs with either the .EXE or .COM filename extensions to be run *on top of* Texture, as long as there is enough RAM memory available. For example, synthesizer voice editors and librarians can be invoked from Texture to save, load and edit sounds. When done, Texture pops back up right where you left off.

*At A Glance:*

| |
|---|
| **F**ile<br>e**X**ternal<br>External Program > *(Filename)* |

*Example:*

To leave Texture temporarily and load an external program, stop playback of Texture. Press **F**ile and choose <**X**> (for e**X**ternal). From the **External Program >** prompt, type the name of the program you want to load followed by <**ENTER**>. If you inadvertently enter an invalid program you will receive the prompt: **No such file or directory Retry? Y**es **/ N**o >. **N**o will return you to Texture and **Y**es lets you enter a new name. When you're finished running the external program, you'll see the message: **Any Key to Continue**. Hit any key now to return to Texture where you left off.

*Comments:*

If you don't have enough memory to run the external program, control is returned to Texture.

*See:* DOS Shell, File

---

## DOS COMMAND SHELL <CTRL-D>

*Definition:*

<**CTRL-D**> runs a DOS Command Shell retaining Texture and the current file in memory, allowing the user to execute DOS commands from a DOS command line prompt. The Shell is a "second copy" of DOS that runs "on top" of Texture. Type `exit` <**ENTER**> to return to Texture exactly where you left off. This feature allows DOS commands to be run (such as **type**, **format**, **copy** or **cd**) without leaving Texture. <**CTRL-D**> is invoked by holding down the <**CTRL**> key and pressing <**D**>. You may enter any number of DOS commands. When you are done, type `exit` <**ENTER**> to return to Texture.

*Example:*

Suppose you are working on a song in Texture called **funkey.sng** and you've just made several changes which you wish to keep, but would like to make an extra copy of the old song file before writing over it with the new version. Press <**CTRL-D**>. The screen will go blank and at the top you will see: **Type EXIT To Return To Texture** followed by some information about which version of DOS you are running. Now type `copy funkey.sng funkey1.sng` <**ENTER**>. DOS will perform the copy. Then type `exit` <**ENTER**> to return to Texture.

*Comments:*

DOS must be able to find the file **command.com**

In order for <**CTRL-D**> to work, DOS must be able to find the file **command.com** which should be in your root directory if you are using a system with a hard drive. Include the directory where you keep

**command.com** in your DOS path (see your DOS manual) so that DOS can find it from within any program and from any directory.

_ The e**X**ternal option (available from the **F**ile menu) doesn't require the presence of **command.com** and can be used for similar operations or running other programs from within Texture (see **External**).

> *Note: It is possible to forget that you are in the DOS Command Shell. Once you've issued enough commands to obscure the message* `"Type EXIT to return to Texture"` *there is no on-screen indication that you are in the Shell.*

*See:* Save, External

---

## DOS ENVIRONMENT VARIABLES

*Definition:*

There are currently three configuration parameters that affect all versions of Texture 4. There may be others that are directed at a specific hardware configuration (for instance, the **txmidimetro** variable which at this writing is only available in the Yamaha C1 version). See the appendix which addresses your hardware setup for other possible variables. The DOS Environment Variables can be set in your DOS environment using the DOS **set** command.

### TXHELP

Setting this to the path where the file **txhelp.exe** is located allows Texture to find the help file no matter what directory you are currently in (see also: **Help**).

The syntax is `set txhelp=<path>` where <*path*> is the drive/directory where **txhelp.exe** is located. For example, if the txhelp.exe file is located on drive **C** in the directory **TEXTURE**, you would add this line to your AUTOEXEC.BAT file:

```
set txhelp=c:\texture.
```

## TXSOUND

The setting of this variable will affect the duration of MIDI notes when moving the cursor to a note-on in the MIDI Data Display when viewing or editing MIDI data (see **Edit**).

The syntax is `set txsound=<value>`, where <*value*> is a number from 0 to 65000. Be careful not to set this too high for your machine. Experiment while in Edit Mode to determine a good setting for your machine. A setting of **400** would look like this in your AUTOEXEC.BAT file:

```
set txsound=400.
```

## TXSLOWTRANS

This third parameter slows down the transmission of the Event Chase Table (ECT) and the Default MIDI Program (DMP) Table.

There is only one circumstance that we know of that would cause you to want to use this variable (others may present themselves later). Some older MIDI devices get confused by MIDI data that comes at them too fast, sometimes getting confused by data that isn't even being directed at the instrument's assigned MIDI channel. For example, a Prophet 600 will be easily confused by any fast transmission and will often perform some seemingly random patch changes. One solution is to isolate the instrument on its own port if you can afford the luxury. Another would be to install a MIDI filter right before the device's MIDI input that would filter out all other MIDI channels before the data reached the instrument. If neither of these options seem practical, you can try this:

The ECT and DMP tables are normally transmitted at a **very** high speed. If you have an instrument that gets confused by these transmissions, you can use the **txslowtrans** variable to reduce the speed to whatever is necessary. The system default is zero since this is rarely a problem and fast transmission is desirable.

If you were to set the parameter to **1** the following takes place: For every MIDI event that is transmitted (table data only, not real time playback data), 1 bogus event with no actual MIDI output is issued. These events act as spacers. If you set **txslowtrans** to **15**, 15 bogus events will be issued for every one true event.

It may take a bit of trial and error to find the correct value needed.

_ We suggest trying **5** which seem to work well with our test case without slowing things down too much.

The syntax is `set txslowtrans=<value>`. A setting of **5** would look like this in your AUTOEXEC.BAT file:

```
set txslowtrans=5.
```

*Comments:*

You can set a DOS Environment Variable from the DOS command line **before** running Texture (not while Texture is already running!). A common and useful practice is to include these commands in your AUTOEXEC.BAT file (see **Batch Files** and your DOS manual).

*See:* Batch Files, Edit, Assign Default Programs, Chase Events, Your DOS Manual

---

## COMMAND LINE SWITCHES

*Definition:*

Command Line Switches are special setup commands that you can type in along with the program name. The program name will vary depending on which version of Texture you are using, the most common being **TX** (standard overlay version). Others at the time of this writing are: **TXR** (RAM version), **TXC** (Yamaha C1 overlay version), **TXCR** (Yamaha C1 RAM version), **TXDEMO** (standard demo version), and **TXCDEMO** (C1 demo version).

One or more switches can be typed in following the program name. The most commonly used switch is probably the Song File name which should immediately follow the Program name. This tells Texture to load a particular song on startup. Other switches set the video mode and several switches are provided for MIDI interface setup. Please see the appendix which discusses your hardware setup for more information on hardware related command line switches.

*Switches at the time of this writing:*

_ Video Mode (see Video Mode):

| | |
|---|---|
| **/c** | Force Color Video |
| **/m** | Force Mono Video |
| **/l** | Force LCD Video |
| **/q-** | Quick Video Off Switch |

_ MPU 401 and Compatible Interfaces (See Appendix):

| | |
|---|---|
| **/i:***n* | Non-default Interrupt Number |
| **/b:***hhh* | Non-default Base Address |

_ CMS UART Ports (See Appendix):

| | |
|---|---|
| **/cms=***nn***:***hhh***:***nn* | # of UART ports, base address, extra cycles |

*Example:*

To run Texture with the song **BRAND3** loaded, forced mono video and the interrupt set to 5, type at the DOS prompt:

`tx brand3 /m /i:5` <**ENTER**>.

*Comments:*

Typing the above example every time you wanted to run Texture would get old pretty fast. We suggest that you create a batch file to do the typing for you.

*See:* Appendix, Batch Files, Video Mode

---

## BATCH FILES

*Definition:*

Batch Files are text files that contain one or more DOS commands that will be issued automatically when you type the file name.

You can create a Batch File with any text editor including EDLIN which comes with all versions of DOS. For information on how to use EDLIN, consult your DOS manual. If you have another text editor it will probably be easier to use than EDLIN.

There are many things you can do with Batch Files to automate setting up your system. Your DOS manual is just one of many books which describe the many uses of Batch Files.

_ You may want to use a Batch File to start up Texture if your system requires using one or more of the available Command Line Switches (see **Command Line Switches**).

*Example:*

Assume for the moment that your system requires the interrupt to be set to 5 and forced mono video mode. The syntax to start the program would be:

```
tx /i:5 /m
```

Using your favorite text editor, create a Batch File called **tex.bat** which contains only the one command: `tx /i:5 /m`. Now, whenever you type **tex**, the command `tx /i:5 /m` will be issued.

## AUTOEXEC.BAT

You probably already have a file in your root directory called AUTOEXEC.BAT. This Batch File is run automatically every time you start or reboot your machine. You can insert **set** commands in this file that will store certain information that Texture would like to know about in memory areas called *Environment Variables*. For a complete list of these, see the section entitled **DOS Environment Variables**.

*Example:*

Assume that you keep your **txhelp.exe** file in a directory called `/texture`. Include in your AUTOEXEC.BAT file the line:

```
set txhelp=/texture
```

No matter what directory you are in, Texture will know where to find the help file when you press **H**elp.

*See:* Command Line Switches, DOS Environment Variables

# CHAPTER 8
# EDITING MIDI DATA


Overview 1
Copy <**C**> 1
Erase Tracks <**E**> 3
Quick-Erase Current Track <**CTRL-E**> 4
Undo <**U**> 5
Transpose <**F4**> (Pattern Mode) 6
Splice <**F2**> Pattern Mode 8
Blend <**F3**> Pattern Mode 9
Fill <**F7**> Pattern Mode 10
Block Copy <**F6**> Pattern Mode 11
Block Move <**F5**> Pattern Mode 12
Quantize <**Q**>, <**1**> 14
Overview & Terms 16
Normal quantization 19
Quantize Presets 20
Quantize With Options 21
Recording With Quantize On 22
Duration Settings 22
Tolerance 24
Compress 26
Shift 27
Swing 27
Advanced Features 28
Humanize 28
Durations Only 29
Arpeggiate 29
Global Quantize 29
Edit <**F10**> Pattern Mode 31
To Edit Data 33
Fast Editing Features 33
soRt
Match
Locate

Program Change Send
Sound
Undo
Insert <INS> 35
Delete <DEL> 36
Equal Key <=> 36
New Value 36
Cursor Keys 36
<ESC> 36
<ENTER> 36
MIDI Event Types 36
Clipboard 37
Filter/Thin <**F9**> Pattern Mode 39
Channel 41
Note Range 41
Status 41
Thin 43
Exchange <**X**> 43
Note 43
Channel 44
conTroller 44
Program 44
<Nth> Event 44
Scale <**F8**> Pattern Mode 45
Scale Factor 46
Tempo 47
Duration 50
Velocity (Normal) 51
Velocity (Dynamic) 52
Pitch Wheel 53
Continuous Controller 54
After Touch (Channel Pressure) 54
Polyphonic Key Pressure 54
Clip Menu <**F8**> Scale 55
Chord Flip <**CTRL-F**> 57
Global Edit Menu <**CTRL-G**> 58
Pattern Range 59
Edit: All/Channel/Port 60
Proceed/Quicksave First/<ESC> 60
Linearize Song <**CTRL-L**> 62

*This chapter includes all the commands which are used to edit MIDI data. They are for the most part listed in order of complexity, starting with the simplest commands. Some commands contain options which are also listed in order of complexity - such as Quantize. This arrangement will allow you to read only as much as you need to get a particular job done if you are pressed for time.*

---

## COPY <C>

*Definition:*

The **C**opy command allows data to be duplicated from one track, link or pattern to another. **C**opy is an Alpha Key Command available in both Pattern and Link Modes, and as a Global command accessed by <**CTRL-G**>. **C**opy will replace any data that happens to be present at the destination pattern, track or link. In the case of pattern to pattern copying, data will be replaced only on the tracks selected during the Copy process. Data in other tracks will remain unaffected. Global copy is track to track only.

*At A Glance:*

```
When in Pattern Mode:
Copy
   Copy: Pattern / Track  Enter Letter >
      COPY Track->Track  Tracks: From,To (If Copying Track)
      COPY Pattern->Pattern (If Copying Pattern)
      Patterns:From > (Default) To > (Default)
         (If To Pattern is Longer than From Pattern)
         Before COPY, Truncate Patn (To) To Equal Patn (From)?
         Yes / No >
         (If To Pattern is Shorter than From Pattern)
         Before COPY, Extend Patn (To) to Equal Patn (From)?
         Yes / No >
```

When in Link Mode:
**C**opy
COPY Link: From > To >

As A Global Command:
<**CTRL-G**>
**C**opy
COPY Track->Track
Tracks: From > To >
*(Global Edit Parameters window)*
Pattern Range: Low > *(1 Default)* High > *(96 Default)*
GLOBAL EDIT CAN'T BE UNDONE:
**P**roceed / **Q**uicksave First /<ESC> to Abort
Enter Letter >

*Note: When copying in Pattern Mode: If the Destination Pattern is not equal to Source, you are given the option to extend or truncate the Destination Pattern's duration as appropriate.*

*Example (Pattern Mode):*

Assume that Pattern 5 is empty, with and end beat of 1000 and that Pattern 2 is somewhat shorter. You wish to copy Tracks C, D and E from Pattern 2 to Pattern 5 and you would like both patterns to end up the same length. Press <**C**>. You will be presented with the option of copying either a **P**attern or a **T**rack. In this case, press **P**attern. At the prompt: **From** type **1** <**ENTER**>. At the prompt: **To** type **5** <**ENTER**>. You will see a Track Map Selection Display. Here you will choose which tracks to Copy to Pattern 5. Using the Track Map Selection keys select Tracks C, D and E for copying. Press <**ENTER**>. You will be prompted: **Before COPY, Truncate Patn 5 to Equal Patn 1? Y**es / **N**o. Choose <**Y**> so the two patterns will now be the same length. The tracks are then copied and Pattern 5 is truncated to equal Pattern 2.

*Comments:*

In the case of link Copying, all the performance parameters (Mute, Transpose, Repeat, etc.) are copied to the new link location.

_ As is the case with most commands, <**ESC**> may be used to bail out of Copy before completing the input sequence. When a copy has been

made (except in the case of link copy), **U**ndo will reverse the effects of the command provided there have been no subsequent changes.

If you wish to copy a block of material within a track to another location within the same pattern, use the Block Copy <**F6**> command.

*See:* Block Copy <F6>, Clipboard, Global Edit <CTRL-G>

---

## ERASE TRACKS <E>

*Definition:*

**E**rase Tracks enables MIDI data on any number of tracks in a pattern to be erased within beat:subbeat:tbu boundaries defined by the user. The pattern's Dimension remains unchanged. **E**rase is an Alpha Key Command accessed by hitting the <**E**> key.

*At A Glance:*

**E**rase
ERASE Tracks
Tracks A-X *(Track Map Selection Display)*
Region Begin *(Default 1:00)* > // End *(Pattern End Beat Default)*

*Example: Erase*

To erase unwanted data from a track, press <**E**> for **E**rase. You will be prompted with: **ERASE Tracks A-X**, with the current track as the default selection. Using the Track Map Selection Keys, select the tracks you want to erase followed by <**ENTER**>. You will next be prompted for the region you wish to erase. Enter the appropriate **Region Begin** and **End** times and the selected tracks will be erased within the chosen region.

Timebase units may also be included in the region Begin or End beat specifications, such as 28:06.3.

_ **U**ndo will restore an erasure to a pattern provided that you have made no further changes.

*Comments:*

If you erase a region that includes a note's note-on but not its note-off, the entire note is erased (note-on and note-off). If you erase a region that starts past a note-on but before the corresponding note-off, the note-off is moved to the TBU before the region Begin point. These two features combined assure intelligent handling of regions that begin or end in the middle of notes.

If you wish to erase the entire current track, another command called **Quick Erase** <**CTRL-E**> is available which does the job in one step without prompts (see **Quick Erase**). If you wish to erase complete Patterns, use the **Z**ap command (see **Zap**).

Erase is available from the **Global Edit** <**CTRL-G**> menu and in this context can be used over a range of patterns. When using Erase from the Global Edit menu, you cannot designate a region; selected tracks are fully erased (see **Global Edit**).

*Note: The **E**rase command leaves a small number of bytes in the size field. The number of bytes has a direct relationship to the number of beats in the pattern. This data is made up of timing bytes or rests plus an end of track byte which together are represented in the MIDI Data Display as an End Time. Think of a track in this state as **initialized** (you can insert events using **Edit** in this state). To un-initialize the track and remove the rests you can use the **Quick Erase** <**CTRL-E**> command.*

*See:* Quick Erase, Zap, Global Edit <CTRL-G>

---

## QUICK-ERASE CURRENT TRACK <CTRL-E>

*Definition:*

The Quick-Erase feature enables instant erasure of all data on the current track within the current pattern boundaries. <**CTRL-E**> is invoked by holding down the <**CTRL**> key and pressing <**E**>.

*At A Glance:*

| |
|---|
| <**CTRL-E**> |

*Example:*

Use <**CTRL-E**> to instantly erase the current track. You will not be asked a region, nor can you erase more than the current track with <**CTRL-E**> You can restore a Track after <**CTRL-E**> by hitting **U**ndo if you have made no further changes to track data.

> *Note: There is a minor difference in the effect of Quick-Erase as compared with the **E**rase command. Quick Erase removes a track's internal timing bytes, which are left in place when using **E**rase. This is reflected in the displayed byte count for each track (to the right of the track name in the Multi-track display). If you are looking for ways to reduce playback overhead, using Quick Erase on tracks that contain nothing but these timing bytes can help a bit as Texture only schedules tracks for playback if they contain data.*

| |
|---|
| *See:* Erase |

---

**UNDO <U>**

*Definition:*

**U**ndo reverses the effect of the last change to pattern data. An Alpha Key Command, **U**ndo works in all modes and with every major command that affects data changes to a single pattern. You may also *undo* **U**ndo (redo) by hitting **U**ndo again.

*At A Glance:*

| |
|---|
| **U**ndo<br>UNDO last change to Pattern *(Current Pattern Number)?*<br>**Y**es / **N**o *(Enter Y or +, N or -)*<br>**U** *(Following the Undo Command)*<br>REDO Last Change to Pattern? *(Current Pattern Number)*<br>**Y**es / **No** *(+ or -)* |

*Example:*

Use **U**ndo if you make a mistake *after* completing a Texture command sequence involving data changes to a single pattern. Before making any more changes to Texture data, press <**U**> to invoke **U**ndo. You will be prompted: **UNDO last change to Pattern (***# of last pattern edited***)? Y**es **/ N**o. Press either <**Y**> or <+> for **Y**es and the pattern will be restored to its former state. Pressing <**U**> (followed by <**Y**> or <+>) a second time will produce "swapping" of the (once again) original data with the changed data (**REDO Last Change to Pattern (***current Pattern default***) ? Y**es **/ N**o).

*Comments:*

You may hit **U**ndo repeatedly to toggle back and forth between the pre- and post- edit versions of a pattern, viewing and/or listening to the difference between the two versions. This is very helpful when you're not quite sure if the edit operation you've selected is exactly what you wanted.

It doesn't matter how many tracks were affected by an edit, Undo will reverse all the data that was changed by the command. For instance, if you transpose all tracks with one invocation of the Transpose <**F4**> command, Undo will un-transpose all tracks.

**U**ndo only affects changes to track data in a pattern, and only on the most recent change to your music.

To protect yourself further, use blank patterns to hold copies of important work that you will be experimenting with. Also, save to disk often during a Texture session to protect your data from loss should the power to your PC be interrupted.

_ File operations such as loading or saving a song or pattern cannot be undone.

_ **F**ile **S**ong **N**ew cannot be **U**ndone either as this clears all song memory.

Remember that you can only **U**ndo your last change made to a Pattern. Also remember that simply hitting <**ESC**> within a command sequence will take you out of the command with no data changes made. Since **U**ndo only affects changes to track data in a pattern it will have no effect on link information such as Link Delete, Insert, Transpose, Mute etc..

*See:* Erase, escape <ESC>, File, Quick Erase, Zap

---

## TRANSPOSE <F4> (PATTERN MODE)

*Definition:*

Transpose is used to shift pitches on a track or a region of a track up or down by a number of semitones (half steps) limited only by the MIDI note range (C0 thru G10). Transpose is accessed with Function Key <**F4**> in Pattern Mode.

In Link Mode, Transpose is also available as Function Key <**F4**> but only affects the selected tracks during playback for the duration of the link. (See the chapter on **Link Mode**).

*At A Glance:*

When in Pattern Mode:
<**F4**> Transpose
TRANSPOSE
Tracks A-X *(Select Track Map Display)*
Semitones > *(Enter Negative or Positive Number)*
Begin 1:00 > *(Default)* // End > *(Pattern End Beat Default)*

*Example:*

To Transpose track(s) or a section of a track(s), press Function Key <**F4**> to invoke Transpose while in pattern mode. At the **Tracks** prompt, use the Track Map Selection keys to select which tracks you wish to transpose, followed by <**ENTER**>. Next you'll be asked to specify the number of semitones. To transpose down, press the <-> (minus key) and a number <**ENTER**> (the <+> sign is optional when transposing up). Next, Texture will ask you for the region within which to transpose. You may select the Pattern Begin and End beat default by hitting <**ENTER**> twice, or type a new **Begin** <**ENTER**> and/or **End** <**ENTER**>.

*Comments:*

To transpose up one octave, use a value of 12 semitones. To transpose down one octave, you would use a value of -12 semitones.

_ **U**ndo will reverse a transpose operation provided that no track data has been changed in Texture since the transposition.

Transpose is also available from the Global Edit menu <**CTRL-G**>.

*See:* Global Edit, Link Mode

---

## SPLICE <F2> (PATTERN MODE)

*Definition:*

Splice enables two patterns to be joined together end-to-end. Splice is a Function Key Command available as <**F2**> in Pattern Mode.

*At A Glance:*

```
When in Pattern Mode:
<F2> Splice
   SPLICE Patterns
   Patterns: Front > Back >
```

*Example:*

To join or splice two patterns together, press <**F2**> (from Pattern Mode) to invoke Splice. At the **Patterns: Front** prompt, type the pattern number of the pattern you want for the beginning of your new spliced pattern, followed by <**ENTER**>. This prompt will default to your current pattern setting. At the **Back** prompt (this prompt will also default to your current pattern setting) type the number of the pattern you want to follow your first choice, <**ENTER**>. Your **Front** pattern will now have a new **End**, and will contain its original material followed by the contents of the **Back** pattern. The pattern you selected as **Back** will remain unchanged.

*Comments:*

**Splice** only works with patterns. To splice data at the track level, use the **Clipboard**, **Block Move**, or **Block Copy** commands.

_ **U**ndo will reverse a splice, provided no other changes have been made to track data after the splice was made.

*See:* Block Copy, Block Move, Clipboard, Link Mode, Linearize Song

---

## BLEND <F3> (PATTERN MODE)

*Definition:*

Blend enables MIDI data from one track in a pattern to be merged with MIDI data from another track within that pattern. In Texture, you blend *from* one track *to* another and the *from* track is deleted for you. Blend is a Function Key command <**F3**> of Pattern Mode.

*At A Glance:*

```
When in Pattern Mode:
<F3> Blend
   BLEND Tracks
   Tracks: From,To >
```

*Example:*

To Blend or merge data from one track to another press <**F3**> to invoke Blend. You will be prompted: **BLEND Tracks: From,To**. First type the letter of the source track, then the letter of the destination track followed by <**ENTER**>. The source and destination tracks are merged, replacing the original destination track and deleting the source track. The destination track now contains the data from both tracks.

*Comments:*

Blend has many uses, among them consolidating tracks if you find yourself running short. Another application might involve shaping a final improvisation from several takes. Essentially you would record each take on a separate track, using the **E**rase command to remove the unwanted

sections of each improvisation. The resulting sculpted improvisation could be blended to one track.

Blend retains the MIDI channel information of the source and target tracks being Blended.

In Texture MIDI data on a given track can be sent to more than one MIDI channel. For example, suppose you have material on Track C which was originally recorded on MIDI Channel 14. You decide to Blend this to Track P which contains data originally recorded on Channel 12 but has been assigned to allow all channels (shown as *****). Both passages will be contained on the same track but will play on different MIDI channels. (For more on this subject, see **Assign Channel**).

Blend is available from the **Global Edit** <**CTRL-G**> menu and in this context can be used over a range of patterns (see **Global Edit**).

_ You can **U**ndo a Blend provided you have made no other changes to track data in the meantime.

*See:* Assign, Block Copy <F6>, Block Move <F5>, Global Edit <CTRL-G>

---

## FILL <F7> (PATTERN MODE)

*Definition:*

Fill enables an excerpt of selected track(s) to be specified using **Source Begin** and **End** times. The selected phrase is then written repeatedly starting at beat 1:00 and ending at the pattern end beat, deleting any previous data on the selected track(s). The overall pattern length does not change. Fill is a Function Key Command (Pattern Mode, <**F7**>). It is typically used to create repeating patterns (*ostinatos*) from short segments of a track or tracks. Some common applications are extending a drum figure to fill an entire pattern or filling a track with a particular continuous controller to subsequently be scaled to create a rising or falling effect. Keep in mind that it is easy to fill the pattern with a phrase and then selectively erase sections where the phrase is not appropriate.

*At A Glance:*

When in Pattern Mode:
<**F7**> Fill
FILL Tracks A-X *(Track Map Selection Display)*
Source Begin > 1:00 *(Default 1:00)* // End > *(Pattern End Beat Default)*

*Example:*

To Fill an entire track with a phrase of MIDI data, press <**F7**> Fill while in Pattern Mode. Use the Track Map Selection keys to choose which track(s) to fill followed by <**ENTER**>. You will then be prompted: **Source Begin 1:00 >**. If the material you wish to fill the pattern with begins somewhere other than 1:00, type in the appropriate number followed by <**ENTER**> or simply <**ENTER**> to accept the default. The next prompt will ask for the Source **End >**. Here, specify the exact beat where the phrase you wish to repeat ends (for a four beat phrase which starts on beat 1:00, the correct end is 5:00). Type the beat (sub-beat resolution is acceptable) followed by <**ENTER**>. The track(s) you selected will now be entirely filled with the repeated phrase. Note that the phrase you defined will now start at the beginning of the pattern, regardless of where it was originally located. In other words, if you choose a Source Begin at 10:04, and End at 12.04, all original data from 1:00 to the pattern end beat will be replaced with the phrase pulled from 10:04 to 12:04, over and over and over.....

*Comments:*

Many people use Fill to rapidly construct repetitive drum, percussion, or bass tracks. It is common to Fill a track with a phrase, then edit or punch in the parts you want to change.

_ Like all single pattern edits, you can **U**ndo a Fill provided there have been no changes to track data since the Fill operation.

*See:* Block Copy <F6>, Block Move <F5>

*Definition:*

Block Copy enables a section of MIDI data on a track to be copied to a new location either on the original or on another designated track. Block Copy is accessed in Pattern Mode by pressing Function Key <**F6**>.

*At A Glance:*

When in Pattern Mode:
<**F6**> Block Copy
BLOCK COPY
Tracks: From, To >
Source Begin > *(1:00 Default)* // End > *(Default Pattern End Beat)*
Destination Beat > *(1:00 Default)*

*Example:*

On the ninth beat of a pattern with an end of 33:00, there is a 4-beat phrase on Track A that you would like to copy to Track P, starting at beat 25:00. Press <**F6**> to invoke Block Copy. First you will be prompted to enter the source and destination tracks. In this example, type **AP** <**ENTER**>. Next you must specify the boundaries of the region (block). In this case, type **9** <**ENTER**> for the **Source Begin** beat. For the **End**, type **13** <**ENTER**>. Next, you will be queried for a **Destination Beat**. Here, type **25** <**ENTER**>. Your four beats have now been Block Copied.

*Comments:*

You will find Block Copy very useful for duplicating portions of tracks within a pattern. To copy an entire track or pattern, use the Alpha Key Command **C**opy. To create *ostinatos* and other repeated figures, use the Fill command <**F7**>.

To Block Copy a region within the same track, just type the same track letter twice when responding to the track request.

Unlike Blend, Copy commands do not automatically **E**rase the source track data.

_ **U**ndo will reverse a Block Copy operation provided that no track data has been changed in Texture since the Block Copy.

*See:* Blend <F3>, Copy, Fill <F7>

---

## BLOCK MOVE <F5> (PATTERN MODE)

*Definition:*

Block Move enables MIDI data between specified boundaries to be moved to a new start point and can affect multiple tracks at once. Block Move is accessed in Pattern Mode by pressing Function Key <**F5**>.

*At A Glance:*

When in Pattern Mode:
<**F5**> Block Move
BLOCK MOVE
Tracks A-X *(Track Map Selection Display)*
Begin > *(1:00 Default)* // End > *(Default Pattern End Beat)*
New Start > *(1:00 Default)*

*Example:*

In a pattern with an end of 33:00 beats, record a four-beat phrase starting at beat 1:00. Record other four-beat fragments on other tracks also starting at beat 1:00. Call up the MIDI Data Display (if not visible already) by hitting **V**iew. Let's move this phrase on all tracks so that it begins on beat 25:00. Press <**F5**>. You will be prompted to select tracks. Use the Track Map Selection keys to choose all the tracks that you have recorded (hitting <*****> will select all possible tracks). Press <**ENTER**> to complete the track select command. Next, you will be prompted for the **Begin** beat of the region you wish to Move. In this example, just press <**ENTER**> to accept the default Beat 1:00. Now you will be prompted for an **End** Beat. In this example type **5** <**ENTER**>. Note that the end beat is the beat on which the excerpt we wish to Move is finished. Next, you will be prompted for a **New Start** beat. In this example type **25** <**ENTER**>. The four-beat phrase will be moved from beat 1:00 to beat 25:00 on all the tracks you selected. Data originally appearing at the move destination will be merged with the moved excerpt.

*Example:*

There is a wrap-around affect available with Block Move which can be used to "rotate" MIDI data within a pattern. For illustration purposes, try this:

Create a pattern with an end of 9:00 and record a phrase that lasts the length of the pattern. Now do the following: Choose Block Move <**F5**>. Use the <*****> key to select all tracks. For **Begin** hit <**ENTER**> to accept 1:00. For **End** hit <**ENTER**> to accept 9:00. For **New Start** type **2** to move the start beat from beat 1:00 to beat 2:00. Press <**ENTER**>. Play the Results. Notice that the new beat 1:00 is in fact the old beat 8:00. The Data was moved ahead one beat and the last beat was wrapped around to Beat 1:00.

*Comments:*

You can create delay type effects by copying a track to another track and then Block Moving either one of the tracks forward by a subbeat or even by a Timebase unit or two.

_ You can **U**ndo a Block Move provided there have been no changes to track data since the Block Move operation.

*See:* Copy, Clipboard, Dimension

*Definition:*

To Quantize is to correct or align the rhythm of a musical phrase. In Texture, a region of a track or tracks can be "corrected" to a rhythmic precision, degree and style chosen by the user. The Quantize Menu also includes a function for the purposeful un-quantizing or *humanizing* of musical phrases.

*At A Glance:*

<**1**> Quantize (Main Screen)
Toggle Between Enabled and Disabled

**Q**uantize
QUANTIZE PRESETS
    Quantize **T**rack
        QUANTIZE Current Track Using Preset: (1 - 6)
        Enter Number > *(Current Setting)*
    Quantize With **O**ptions
        QUANTIZE Region in Track(s) Using Preset: (1 - 6)
        Enter Number > *(Current Setting)*

```
1 - 6  (Select)
    (Select/Move to Preset Number) (Arrow Moves)
Edit
    Edit Quantize Preset Enter Letter or Number >
    Type
        TYPE:Quantize/Humanize/Durations Only/Arpeggiate
        Enter Letter >
    Divisor
        DIVISOR Enter Value >
        Must Divide Evenly Into Timebase
    duRations
        DURATIONS: Uaffected/Align/Equal/Legato
        Enter Letter >
    toLerance
        EARLY TOLERANCE: (percentage 0 - 50) Enter Value >
        LATE TOLERANCE: (percentage 0 - 50) Enter Value >
    Compress
        COMPRESS: (percentage 0 - 99) Enter Value >
    Shift
        SHIFT: (percentage -50 - +50) Enter Value >
    sWing
        SWING FACTOR (0 - 20) Enter Value >
    Copy
        COPY Quantize Preset (1 - 6)
        Enter Number (Current Default Setting) >
        DESTINATION (1 - 6)
        Enter Number (Current Default Setting) >
    Delete
        DELETE Quantize Preset (1 - 6)
        Enter Number >
```

## OVERVIEW AND DISCUSSION OF TERMS

Texture includes many flavors of quantization which can be configured and combined in many ways. Many users will latch on to a particular style of quantization that suits their playing style.

The scope of quantize options is so great that we will present the options starting with normal usage and gradually progress to advanced features.

Even under normal usage, we recommend having a good grasp of how quantization works, as this will allow your interaction with quantize

functions to be more predictable and productive. However, if the technical nature of this discussion bores you or you just don't have the time or perhaps patience to deal with this, skip to the example entitled **Normal Quantization** and you can get to work.

> *Note: If you're not yet familiar with the way Texture displays beats, sub-beats and timebase units (TBU's) we suggest that you turn to the chapter entitled* ***Texture Fundamentals*** *earlier in this manual for an explanation of Beat Notation and Timebase Settings before proceeding.*

To avoid excessive real-time playback overhead and to allow for complex quantize algorithms, tracks are never quantized **during** playback as they are with some sequencers.

_ Quantization can be invoked automatically after each phrase is recorded: This method will be referred to as "*recording with quantize on*".

_ Quantization can also be specifically applied by the user on any region within a track or tracks: This method will be referred to as "*quantizing a region*".

> Keep in mind that when recording with quantize on, it is still easy to re-capture the un-quantized phrase without re-recording the parts.

*Divisor, Targets & Timebase:*

The quantize function subdivides each beat into quantize *targets*. The amount by which a beat is subdivided is called the quantize *divisor*. The term *timebase* has already been discussed and used in this manual and is important to understand in the current context.

_ The current timebase determines the number of possible subdivisions of a beat.

At the default timebase of 96, each beat can be divided into no more than 96 equal parts. Therefore, the maximum divisor under timebase 96 would be 96.

> Because of the nature of quantize operations, only divisors which divide evenly into the timebase and are values smaller than the timebase itself are allowable.

The allowable divisors for timebase 96 are: 1, 2, 3, 4, 6, 8, 12, 16, 24, 32 and 48. Each of these values will divide evenly into 96, leaving no remainder.

| Time-Base | Allowable Divisors | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 48 | 1 | 2 | 3 | 4 | 6 | 8 | 12 | 16 | 24 | | | | | | |
| 72 | 1 | 2 | 3 | 4 | 6 | 8 | 9 | 12 | 18 | 24 | 36 | | | | |
| 96 | 1 | 2 | 3 | 4 | 6 | 8 | 12 | 16 | 24 | 32 | 48 | | | | |
| 120 | 1 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 20 | 24 | 30 | 40 | 60 |
| 144 | 1 | 2 | 3 | 4 | 6 | 8 | 9 | 12 | 18 | 24 | 36 | 48 | 72 | | |
| 168 | 1 | 2 | 3 | 4 | 6 | 7 | 8 | 12 | 14 | 21 | 24 | 28 | 42 | 56 | 84 |
| 192 | 1 | 2 | 3 | 4 | 6 | 8 | 12 | 16 | 24 | 32 | 48 | 64 | 96 | | |

The above table shows all of the Texture timebases and the allowable divisors for each one. Notice the divisors which are common to all of the timebases:

1, 2, 3, 4, 6, 8 and 12

These are the numbers which divide evenly into that magic MIDI number: 24 (which is also the number of subbeats or MIDI clocks in a beat). Texture supports the timebases which are inherent to the MPU 401 interface when it is in intelligent mode. All of the supported timebases are multiples of 24.

A divisor of 4 in any timebase will yield 4 quantize targets per beat. Targets represent acceptable note-on locations using normal quantization and are the basis for most quantize functions. Using a divisor of 4, the quantize targets would represent the exact beat/subbeats where 4 equally spaced notes per beat would be positioned. Therefore, the first 4 targets of a region which begins at beat **1:00.0** would be: **1:00.0**, **1:06.0**, **1:12.0** and **1:18.0**. (Remember, each beat is divided into 24 subbeats which are analogous to MIDI clocks. The number following the <**:**> (colon) represents the number of subbeats. 24 (total subbeats in a beat) divided by 4 (current divisor) equals 6 subbeats; This is the increment used above.)

Assume for the moment that your music will use the formula: 1 quarter note = 1 beat (Texture doesn't care, but this allows us to speak of notes as quarter, eighth, sixteenth, etc. for this discussion). The four equally spaced notes per beat (in this case, per quarter note) mentioned above are therefore sixteenth notes. In other words, if 1 quarter note = 1 beat and you want to quantize to a resolution of 16th notes, use a divisor of 4, regardless of the timebase. Here is a chart of divisors which are common to all timebases and their relationship to musical notation.

*Assuming 1 quarter note = 1 beat:*

| Divisor | Resolution |
|---|---|
| 1 | Quarter Notes |
| 2 | Eighth Notes |
| 3 | Eighth Note Triplets |
| 4 | Sixteenth Notes |
| 6 | Sixteenth Note Triplets |
| 8 | Thirtysecond Notes |
| 12 | Thirtysecond Note Triplets |

Once again, the above values are available in all supported timebases. There are some interesting divisors that are available in specific timebases such as 5, 7 and 9.

Now for the important part:

The divisor sets the maximum resolution for a region which is to be quantized.

## NORMAL QUANTIZATION

When normal quantization is applied to a region, notes which fall on subbeats or TBUs which are *not* targets are moved to the closest target, and their durations are left unaffected. To achieve this, the note-offs are moved by the same amount and in the same direction as the note-ons. Let's play around with normal quantization before moving ahead.

*Example (Normal Quantization):*

First, we'll set up a *Quantize Preset* to quantize to 8th note resolution. Press <**Q**> for **Q**uantize. This is the main Quantize menu and we'll go over all the options later. For now, let's set up Preset # 2. Hit number key <**2**> to select the second preset (if you already have created a #2 preset, delete it now using **D**elete). Now press <**E**> for **E**dit. This is the Edit menu for Quantize Presets. All we need to do for normal quantization is to select the correct divisor, so hit <**D**> for **D**ivisor. The value we want, knowing that 8th notes happen twice per beat, is 2. Type **2** followed by <**ENTER**>. Hit <**ENTER**> a second time to accept the edited preset. You should now be looking at the main Quantize menu, with Preset #2 reading: `2) Quantize 2 Unaff`. There should also be a little arrow to the left of the **2)**. This arrow shows that preset #2 is currently active. Hit <**ENTER**> to close the Quantize Presets menu.

For the purposes of this example, before recording anything, make sure that Quantize is toggled off. To do this, look in the bottom left window of the Texture screen. Directly to the right of the word **Quantize** is either a

tiny dot, or the word **Preset** followed by **#2**. If you see only the tiny dot, Quantize is toggled off. Otherwise, press the <**1**> key to toggle it off.

With the metronome on at one beep per beat, record a short phrase of eighth notes (two notes per beat) at an easy tempo on an empty track in an empty pattern. Try to play as accurately as you can. Next, play back the phrase and make a mental note of any rhythmic discrepancies. To quantize the track, hit **Q**uantize **T**rack, followed by the number <**2**> (accepting quantize preset 2). The track should now be quantized. Play the track again to here the results. The track should now consist of totally robotic eighth notes. If you like, look at the events in the Midi Data Display (**V**iew) and notice that all notes start at bb:00.0 or bb:12.0 ("bb" represents any possible beat in the pattern).

To compare before and after quantization, use the **U**ndo command repeatedly to toggle between the two versions of the track.

When applying eighth note quantization, remember that it is not necessary that you played only eighth notes, only that eighth notes were the fastest notes you played. The same is true for any quantize value. For instance, if you played mostly eighth notes but occasionally threw in some sixteenth notes, you probably want to use quantize with sixteenth note resolution (quantize divisor of 4).

## QUANTIZE PRESETS

In the above example, we set up Quantize Preset #2 to perform normal quantization with eighth note resolution. This preset will be saved to disk with the current song. Quantize can be applied to any track at any time using the parameters of this preset with a minimum of keystrokes. Assuming you are positioned on the track you wish to quantize, you can apply any one of the six presets to the track with 3 keystrokes: **Q**uantize **T**rack and the preset number (1-6). This is both fast and powerful once you have set up the presets that are appropriate for the music you are working on.

In the following pages you will be shown how to create presets which let you manipulate the rhythm of any section of track(s) in a multitude of ways. Which techniques you use and how you arrange your presets is totally up to you and will most likely vary from one project to another. Let's take a moment now to experiment with preset manipulation and editing before moving on.

*Example (Editing Quantize Presets):*

Let's just play around with the presets and not worry about the results. In order to do this, position to a track in an empty pattern so that you don't accidentally malign anything you care about.

Invoke the **Quantize Presets** window (**Q**uantize). Notice the Right Arrow (_) next to one of the numbers 1 through 6 at the left of the window. Hit any number between 1 and 6. You will see the arrow move to the preset matching the number you hit. This is how you select the *current* quantize preset. Select <**5**>. Hit **E**dit. You are now looking at the **Edit Quantize Preset** window. Once again, hit any number between 1 and 6. The action here is analogous to moving the arrow in the **Quantize Presets** window, you are selecting the *current* preset. Once again, select <**5**>. Hit **T**ype. The Type sub-menu appears. Hit **D**urations Only. The word **DurOnly** appears in the Type field. Hit **D**ivisor. Type **6** <**ENTER**>. Data is entered in the other fields in a similar manner. Hit <**ENTER**> now to accept this edit. You should see DurOnly with Divisor set to 6 in the number 5 preset. Hit **C**opy. Hit <**ENTER**> to accept number 5, the current preset. Press the number **6** for destination. You just copied preset 5 to preset 6. Now hit **D**elete followed by <**ENTER**> to delete the current preset (5).

## QUANTIZE W/ OPTIONS

*Quantizing A Specified Region of Track(s):*

Quantization can be applied to many tracks at once and can be limited to a region of time within the pattern. The former could be used to quantize a multi-track drum part with one command and the latter to quantize a short passage of eighth note triplets within a larger passage of sixteenth notes.

*Example (Quantize w/ Options):*

In an earlier example we quantized an entire track by hitting **T**rack from the Quantize Preset window. Let's try a command that gives us more control. From the Quantize Preset window <**Q**>, press <**O**> for Quantize w/ **O**ptions. The prompt reads: **QUANTIZE Region in Track(s) Using Preset (1 - 6)**. Hit <**6**> to use the preset we copied above. Now use the track selection keys to select as many tracks as you would like to quantize (assuming this is an empty pattern, use your imagination), followed by <**ENTER**>. Now you can select a region within the pattern. The important thing is to remember this feature is available - it will allow you to quantize a small piece of the selected track(s) within the pattern. For now, type **3**

<**ENTER**> **5** <**ENTER**> and the operation is finished. You just quantized the notes between beat 3 and beat 5 on the tracks you selected.

*Note: You can be more precise if you like. In the above example you can specify region times down to the TBU level by specifying times such as 3:07.2, 5:22.1, etc..*

## RECORDING WITH QUANTIZE ON

There may be times when you want to have quantize applied automatically to tracks as they are recorded. This is easily done. Use the Quantize Presets window <**Q**> to select or create the appropriate preset. Close the window, then toggle Quantize on by hitting the <**1**> key. If preset number 3 is the current preset, you will see **Quantize Preset #3** in the lower left window above the word **AutoPunch**. This is the preset which will be applied to any newly recorded material.

*Restoring the Track Un-quantized:*

If you record a track with quantize on and then realize that you don't like the affect, you can use the **B**uffer command to restore the track in un-quantized form, as long as you haven't since recorded any other tracks or exited from Texture.

To do this, first toggle quantize off <**1**>, hit **B**uffer, and select the appropriate loop (usually 1). (For a more detailed explanation of the Buffer command, see the section on **Buffer** in the chapter: **Recording and Playback**.

Having <**1**> **Quantize** toggled on does **not** quantize already existing data in the current track, but **will** quantize any data that is freshly recorded or imported from the record buffer to a track using the **B**uffer command.

*Note: While a quantize operation is in progress, even if quantize is toggled off via the <**1**> key, the **Preset #** indicator will appear next to the word **Quantize** above the word **AutoPunch** in the lower left window. During long quantize procedures, such as with Global Edit, this serves as a simple way of indicating which preset is being used.*

## DURATION SETTINGS

In the **Edit Quantize Preset** window (**Q**uantize **E**dit) the third option is du**R**ations. When you press <**R**> to access du**R**ations, you are presented with the following choices: **U**naffected, **A**lign, **E**qual and **L**egato.

_ **Unaffected**: This is the default setting for durations. Unaffected means that notes will last the same amount of time before and after quantization. Consider this: If Texture moves a note-on back by three time base units in order to quantize it, the duration is increased by three time base units if the note-off isn't also moved back by the same amount. In **Unaffected** mode, Texture moves all note-offs in tandem with any note-ons that are moved. Generally, quantized music sounds more natural if the duration of notes is left intact - that's why **Unaffected** is the default mode.

_ **Align**: In this mode, note-offs are quantized in the same manner as note-ons. In other words, note-offs are moved to the nearest quantize target. Duration alignment is not affected by Tolerance or Compress but *is* affected by Shift and Swing.

_ **Equal**: This will cause all notes to have the same duration, which is derived from the quantize **Divisor** setting. With a Divisor setting of 4, all notes will be one quarter of a beat long. When used in Durations Only mode, durations are adjusted as if the note-ons were being quantized (DurOnly merely turns off the note-on movement). When used with Tolerance or Shift, durations remain equal, regardless of note-on placement.

_ **Legato**: This feature is most commonly used with single line parts. When used with single line parts, it will *tie* your notes together. In other words, all note-offs are moved to the time base unit directly preceding the following note-on. The last note-off will be pushed back to the region's end (to have maximum control over this, use Quantize w/ Options from the Quantize Preset window). Legato works well in all modes including Durations Only - so you can leave note-on placement intact while applying Legato.

Legato is also chord-smart. Normally, if more than one note falls on the same exact beat:sub-beat.tbu, it is interpreted to be a chord and all corresponding note-offs are moved to just before the next note-on found after the chord. You can expand the definition of a chord to be any notes that occur within a certain amount of time by using Legato

in conjunction with Tolerance. (See the section coming up on Tolerance settings for more on this subject.) The result is that it is possible to apply Legato to almost any type of musical phrase with natural sounding results.

## TOLERANCE

**Tolerance** is one of two forms of *Soft Quantization* available in Texture 4 (the other is **Compress**). Tolerance also takes on special characteristics when used with **Humanize** or **Legato**.

When used with normal quantization, Tolerance creates regions of safe haven around each quantize target which we will call a *pocket*. Note-ons which fall in these pockets are left alone, while others are pushed to the pocket's edge. This allows your original feel to be left 100% intact whenever you play *in the pocket*.

_ The Tolerance parameters are accessed from the **Edit Quantize Preset** window (**Q**uantize **E**dit to**L**erance).

Tolerance parameters are in the form of a percentage. The allowable range is 0 to 50%. The percentage represents a portion of beat/divisor. In other words, with a divisor of 4, a Tolerance value of 10% represents a tenth of a quarter of a beat (2.5% of a beat). 50% represents half of a quarter of a beat (12.5% of a beat).

There are two Tolerance parameters: **Early** and **Late**. Early represents the pocket size before the quantize target and Late, after. By default, Late is equal to the setting of Early. This provides a pocket which allows a note to be the same amount Early or Late before quantize will kick in and move it.

By tailoring the relationship of Early to Late, you can force a rhythmic feel that tends to lean before or behind the beat.

| Set both Tolerance parameters to **0** to turn tolerance off. |
|---|

*Example (Quantize with Tolerance):*

First, let's go through the motions of setting up a Quantize Preset which utilizes Tolerance. From the **Quantize Preset** window (**Q**uantize), select preset number 1 by hitting <**1**>. If you already have a preset in this slot, clear it by hitting **D**elete followed by <**ENTER**>. Now hit **E**dit to bring up the **Edit Quantize Preset** window. Set the Divisor to 4 (**D**ivisor **4**

<**ENTER**>). Press <**L**> for to**L**erance. You're now prompted for the Early Tolerance value. Type **15** <**ENTER**> to set Early Tolerance to 15%. Now you are prompted to enter the Late Tolerance value, the value **15** is shown as a default since that's the value you entered for Early Tolerance and symmetry is assumed to be the most common usage. Let's override the default by typing **5** <**ENTER**> for a Late Tolerance value of 5%. These values will provide a subtle soft quantize affect which is more tolerant for notes which push the beat than those which are late. Hit <**ENTER**> to accept the new preset. To apply this preset to the current track, simply hit **T**rack <**ENTER**> now.

To understand what we just did, let's examine the affect of the above Quantize Preset on some fabricated notes. You can, if you wish to "play along at home", set your timebase to 96 and enter the following notes into a track using the MIDI Event Editor <**F10**>.

| | | | |
|---|---|---|---|
| **2:10.0** | **C** | **4** | **ntn** |
| 3:05.0 | c | 4 | ntf |
| **3:11.2** | **D** | **4** | **ntn** |
| 4:05.0 | d | 4 | ntf |
| **4:12.0** | **E** | **4** | **ntn** |
| 5:05.0 | e | 4 | ntf |
| **5:12.2** | **F** | **4** | **ntn** |
| 6:05.0 | f | 4 | ntf |
| **6:13.0** | **G** | **4** | **ntn** |
| 7:05.0 | g | 4 | ntf |

Now let's look at the note-on timing after applying the above Quantize Preset:

| | | | |
|---|---|---|---|
| **2:11.1** | **C** | **4** | **ntn** |
| 3:06.1 | c | 4 | ntf |
| **3:11.2** | **D** | **4** | **ntn** |
| 4:05.0 | d | 4 | ntf |
| **4:12.0** | **E** | **4** | **ntn** |
| 5:05.0 | e | 4 | ntf |
| **5:12.1** | **F** | **4** | **ntn** |
| 6:04.3 | f | 4 | ntf |
| **6:12.1** | **G** | **4** | **ntn** |
| 7:04.1 | g | 4 | ntf |

The quantize targets for all the note-ons in the first list would be bb:12.0, where the question mark represents any of the supplied beat values. These

note-ons are all closer to bb:12.0 than any other possible quantize target with Divisor set to 4. (The other possible targets are bb:00.0, bb:06.0 and bb:18.0.) Our Tolerance setting of 15:5 defines the Tolerance *pocket* to be 15% of a quarter of a beat before and 5% of a quarter of a beat after the target. Since our timebase is set at 96, the time base units are in the range of 0 to 3, which means that the tick which follows 2:11.3 is 2:12.0 (four TBUs per sub-beat). Knowing this, we can determine that the Tolerance pocket for any of these notes would range from bb:11.1 to bb:12.1, with bb:12.00 being the target itself.

Now lets examine what Quantize did to each note-on:

_ 2:10.0 does not fall between 2:11.1 and 2:12.1, so it is moved to the pocket's Early edge, which is 2:11.1.

_ 3:11.2 and 4:12.0 do fall between bb:11.1 and bb:12.1, so they are left alone.

_ 5:12.2 and 6:13.0 do not fall between bb:11.1 and bb:12.1, so they are moved to the pocket's late edge: 5:12.1 and 6:12.1 respectively.

Since durations were not to be affected by this preset, note-offs were moved in tandem with note-on movements.

The affect of the above on a more densely populated track would be to tighten the feel of the track without taking much of the human feel away from it.

*Special Uses for Tolerance:*

The Tolerance settings have special meaning when used with Compress, Humanize or Legato.

_ **Compress**: When used in conjunction with Compress, notes outside of the Tolerance pocket are compressed, and notes inside the pocket aren't moved.

_ **Humanize**: When used in conjunction with Humanize, the Tolerance settings determine the range and character of Humanize (see the section on Humanize below for more information).

_ **Legato**: When used in conjunction with Legato, the Tolerance settings determine the definition of what constitutes a chord. A group of notes

are treated as a chord if the time between one note-on and the next is no greater than the length of the pocket created by Early and Late Tolerance. For example, with Early and Late Tolerance both set to **10%** and Divisor set to **4**, any notes that are within 20% (10% Early plus 10% Late) of a fourth (Divisor 4) of a beat from each other are interpreted as part of a chord.

## COMPRESS

**Compress** is another form of *Soft Quantization* which is analogous to audio compression, the difference being that in this context time is being compressed, not volume.

Compress moves notes closer to their nearest targets based on their original position and the compress amount (the original order is maintained).

The Compress amount is expressed as a percentage (0 - 99%), where 1 provides minimal compression, 99 provides maximum compression (almost the same as normal quantize), and 0 turns Compress off.

As an example, setting Compress to 50% would move all notes half the distance toward their respective targets.

_ The Compress setting is accessed from the **Edit Quantize Preset** window (**Q**uantize **E**dit **C**ompress).

*Soft Quantization: Which Flavor to Use?*

Nothing will answer the above question as well as experimentation will. But here's one set of criteria you can apply: If you are a consistently accurate player, you can stick with Compress as a way of tightening tracks without killing the rhythmic character of the performance. If you generally like the way you play, but can't trust yourself to always be rhythmically correct, Tolerance will keep the parts of your performance that were *right in there* and correct the others. You also have the option of using both. Keep in mind that setting parameters too high in the case of Tolerance or too low in the case of Compress will cause quantization to have little or no affect.

## SHIFT

**Shift** moves the quantize targets earlier or later depending on the value you provide. The shift value is a plus or minus percentage (-50 +50) representing the distance between targets. A minus value will make your targets early, a plus value will make them late. A value of **0** turns Shift off.

Shift can be used to adjust the overall feel of a quantized part to be ahead or behind the beat and can be used in conjunction with any of the other quantize options.

_ The Shift setting is accessed from the **Edit Quantize Preset** window (**Q**uantize **E**dit **S**hift).

## SWING

If the quantize divisor is either 2 or 4, a Swing factor from 0 to 20 may be introduced.

_ When the divisor is set to 2, each beat contains 2 quantize targets. In this case, notes which would normally be moved by quantize to the second target of the beat are delayed by an amount based on the Swing factor.

_ If the divisor is set to 4, each beat contains 4 quantize targets and notes which would normally be moved to the second or fourth targets of the beat are similarly delayed. The Swing factor is accessed from the **Edit Quantize Preset** window (**Q**uantize **E**dit s**W**ing).

The affect varies with the Swing factor and experimentation is the best way to find a factor that suits your needs. To get a feel for this, consider that a part that would normally quantize to straight eighth notes (1:00.0, 1:12.0, 2:00.0, 2:12.0, etc.) will end up as: 1:00.0, 1:16.0, 2:00.0, 2:16.0, etc. when quantized with Divisor 2 and Swing factor 12. Similarly, a part that would normally quantize to straight sixteenth notes (1:00.0, 1:06.0, 1:12.0, 1:18.0, etc.) will end up as: 1:00.0, 1:08.0, 1:12.0, 1:20.0, etc. when quantized with Divisor 4 and Swing factor 12.

The quantize divisor must be set to either 2 or 4 for a Swing Factor to be introduced.

Don't be afraid to experiment with the Swing setting. If you're not getting the results you expect, try switching the beat divisor from 2 to 4 or vice versa.

## ADVANCED FEATURES

*Quantize Type:*

So far, most of the discussion has revolved around *normal* quantization. In the **Type** field of the **Edit Quantize Preset** window, this is shown as **Quantize**. Go to the **Edit Quantize Preset** window (**Q**uantize **E**dit) and hit **T**ype. You will see the following choices: **Q**uantize, **H**umanize, **D**urations Only and **A**rpeggiate. A discussion of the latter three types follows.

### HUMANIZE

When performing a Humanize operation, notes are first moved to the nearest quantize targets, then moved away from the targets in a pseudo-random manner. How far they are allowed to move and in which direction are determined by the Tolerance settings.

> With Early and Late Tolerance values set to 0, Humanize is the same as Quantize because there is no Tolerance pocket to expand into.

With Early and Late Tolerance set to 50 and a divisor of 1, you would probably experience rhythmic chaos as a result of giving Humanize too much room to spread out. A common setting would be something like Divisor 4, Tolerance 10:10. This assumes sixteenth note resolution and would simply loosen up a previously quantized track a bit.

_ Humanize is selected from the **Edit Quantize Preset** window as a sub-choice of **Type** (**Q**uantize **E**dit **T**ype **H**umanize).

### DURATIONS ONLY

When **D**urations Only is selected, note-ons aren't quantized and note durations are affected by whatever is set up in the du**R**ations field.

If **Unaffected** is selected, this preset will do nothing as you've turned off both note-on and note-off quantization. However, **Align**, **Equal**, and **Legato** selections will act on the note-off times without affecting any note-on placement.

Using **Durations Only** is especially useful when used with the **Legato** option.

_ **D**urations Only is selected from the **Edit Quantize Preset** window as a sub-choice of **Type** (**Q**uantize **E**dit **T**ype **D**urations Only).

## ARPEGGIATE

If **A**rpeggiate is selected, the notes in a track which are close together will be sequentially "staggered" by the beat divisor amount to produce an arpeggio effect.

There is no control over the direction of the arpeggio: Notes will be arpeggiated according to the order in which they are found in the original MIDI stream. Nevertheless, many useful effects can be produced from existing tracks with this feature.

_ Arpeggiate is selected from the **Edit Quantize Preset** window as a sub-choice of **Type** (**Q**uantize **E**dit **T**ype **A**rpeggiate).

## GLOBAL QUANTIZE

All quantize options are available from the **Global Edit** menu. The important thing to remember is that the preset you wish to use must be set ahead of time as there is no mechanism for selecting it within the Global Edit process.

As with all Global Edit operations, you will not be able to select a region within patterns to Quantize; selected tracks will be quantized in their entirety. See the entry **Global Edit** elsewhere in this manual that details unique options available when using Global Edit.

As mentioned earlier, quantized tracks are permanently altered. You may **U**ndo a quantized track provided you have not subsequently made any other changes to any track data. You may also turn Quantize off and retrieve the original data from the Buffer if it has not been cleared.

*Note: You may mix different Quantize values within a track. For example, you may record a track with 16th-note quantization and then Blend another track into it with 8th-note triplet quantization. Alternatively, you may quantize different regions of a track using different quantize presets or values.*

*See:* Global Edit <GTRL-G>, Texture Fundamentals

## EDIT <F10> (PATTERN MODE)

*Definition:*

Edit <**F10**> allows you to make detailed changes to MIDI Data on the currently selected track in the current pattern. Edit is a Function Key Command (Pattern Mode, <**F10**>). The MIDI Data Display is automatically displayed in the Right Window when invoking Edit. The blinking left and right wedges (Data Pointers) highlight the current data to be edited. In addition, the **MIDI EVENT EDITOR** menu displays a list of Edit commands.

_ You may Edit a track that was generated by a performance or create tracks by inserting notes individually in the track (see the note below regarding editing an empty track).

The MIDI Data Display shows (from left to right) the **Time** in Beats, the value of **Data 1** (in the case of a note-on this would be the note value e.g. Ab4 or 56), the value of **Data 2** (in the case of a note-on this would be the

note-on velocity value), the MIDI **Channel** assignment (1 - 16) and the Event **Type** (ntn = note-on). As you cursor down through the MIDI events, the track will scroll until you reach the end of the track.

*At A Glance:*

```
When in Pattern Mode:
<F10> Edit
   MIDI EVENT EDITOR
   Match
   Locate
   Program Change Send
   Sound
   Undo
   soRt
   <INS><DEL> Event
   <new value>
   <cursor keys>
   <ESC> Abandon Edits
   <ENTER> Save Edits
   Match
      MATCHING EVENT found: Forward
      Enter Letter >
      MATCHING EVENT found: Forward and Backward
      Enter Letter >
   Locate
      LOCATE Beat # >
      Program Change Send
      Send Program Changes?
      Yes / No
   Sound
      SOUND: Set Note Play Duration (Default)
      Enter Value >
   Undo
      UNDO Last Event Change?
      Yes / No
```

<**INS**>
INSERT: Event Type
**1**. **N**ote-On
**2**. Polyphonic **K**ey Pressure
**3**. **C**ontinuous Controller
**4**. p**R**ogram Change
**5**. **A**fter Touch (Channel Pressure)
**6**. **P**itch Wheel

## TO EDIT DATA

Use the cursor keys to move the Data Pointer to the value you wish to edit. You may edit any field except the **Event Type** field. To Edit a value, type in the new value (visible at the bottom left corner of the screen as you type) followed by <**ENTER**>. An asterisk (*****) appears to the right of each MIDI Event you edit. When you are done editing data, hit <**ENTER**> to *accept* the edit. This means the changes you made will be written to the track. If you want to *bail out* of the edit process without changing the track, hit <**ESC**> and the track will remain as it was. You may **U**ndo the results of an Edit session after the changes have been written to the track. **All** changes you made since invoking Edit with the <**F10**> key and the final <**ENTER**> (which writes the changes you made to the track) will be undone in one step. This is a very useful feature for comparing the before and after edit versions of the track.

*Note: To create tracks from scratch via <**F10**> Edit, you must first initialize the empty track by recording into the track. You don't need to record any data into the track, simply hit **RR**ecord followed by <**SPACE**> and you will have initialized the empty track.*

The cursor arrow keys are used to move around in the Data Display. In addition to the cursor arrow keys, <**PgUp**>, <**PgDn**>, <**HOME**> and <**END**> may be used for rapid scrolling throughout the track.

## FAST EDITING FEATURES

Many edit operations can be performed without moving your right hand from the numeric keypad for fast editing. With this in mind, note that you can substitute the <+> key for **Y**es and the <-> key for **N**o when you are prompted for a **Y**es / **N**o response (e.g. **UNDO Last Event Change? Y**es / **N**o). If you type in a data value, pressing any cursor movement key will cause that value to be *entered* into the event list just as if you had pressed

<**ENTER**> after typing the value. This can be a real time saver when you are editing lots of data.

You may type in note values as either letter names (e.g. **Ab7**) or numbers (e.g. **92**) regardless of which display mode you are in (see **Note View** <**CTRL-N**>).

_ There are many commands available while in Edit and some important subtleties which will help you work efficiently when in Edit mode (see Equal Key <=> and so**R**t below). Read on....

## SORT

Sort (access: <**R**> for so**R**t) places edited events in their timed order. When an event's time is changed, the event list is not automatically resorted until you exit the editor. When editing, you may at any time hit so**R**t to put the event list in proper order. Whenever you exit Edit with <**ENTER**>, the event list is automatically sorted before writing the edited list to the track.

*Note: Older versions of Texture would automatically sort the event list whenever an event's time was changed. Many users found that it was disconcerting to have an event jump out of viewing range after entering a time. Starting with version 4.0, the Sort command was added so that MIDI Events would not move until the user so desires.*

## MATCH

**M**atch enables you to swiftly locate a note-offs note-on or vice versa. For example, suppose the current event is a note-off (displayed as Type *ntf* or *ntn* with velocity data of 0). Match would be used to find the corresponding note-on.

Match looks both before and after the current event and reports whether it has found a **B**ackward or **F**orward related event. By pressing the appropriate key (<**B**> or <**F**>), the Data Pointer is automatically moved to the Matched event.

## LOCATE

**L**ocate lets you reposition to a particular beat. Press **L**ocate, the Beat you wish to locate to (whole beat values only) followed by <**ENTER**>. For example, to locate to beat 13, type L 13 <**ENTER**>.

## PROGRAM CHANGE SEND

**P**rogram Change Send allows you to enable or disable Program Changes from being transmitted when you position the Data Pointer on a MIDI Program event while in Edit or the MIDI Data display.

## SOUND

Whenever you position the Data Pointer to a note-on, the note is transmitted via MIDI with a fixed duration. The **S**ound setting allows you to set the note play duration for Edit and View modes. The desired amount of duration may vary depending on the type of work you're doing. Also, the actual duration time, based on the value you enter, is machine dependent. Faster computers will want greater values. The system default is set at 156.

You may use the DOS Environment Variable **TXSOUND** to set a different default for your machine. Setting the value of Sound to 0 disables the transmission. See the **TXSOUND** entry under **DOS Environment Variables** in the chapter **File Management & DOS** for more details.

*Note: Setting the sound too high could slow cursor movement down to a crawl. The overall range is 0 - 65535. On most machines, values above 5000 are useless.*

## UNDO

**U**ndo lets you "take back" the last change to an event while in Edit.

For example, if by accident you have deleted a note, pressing **U**ndo before changing anything else will let you restore it. You are prompted: **UNDO Last Event Change?** before undo does it's work. There is no Redo within Edit. Remember that until you <**ENTER**> out of Edit, no changes have been written to the track. Even **after** you <**ENTER**> out of Edit, you may use the higher level **U**ndo to Undo/Redo all changes to the track. If you <**ESC**> out of Edit, no changes are written to the track.

## INSERT <INS>

**Insert** allows individual MIDI events to be inserted into the track by pressing the <**INS**> key on your computer. You can use this function to insert any supported type of MIDI event into the track.

When you press <**INS**>, you will see the menu entitled **INSERT: Event Type**. Choose the type of event you wish to insert. The choices are: **N**ote-On, Polyphonic **K**ey Pressure (<**K**>), **Continuous** Controller, p**R**rogram Change (<**R**>), **A**fter Touch and **P**itch Wheel. You may enter your choice by the Alpha Key command or by the number to the left of each choice.

When inserting a note-on event, a corresponding note-off is created automatically (this ensures parity of note events and is the only way to insert a note-off). Texture inserts the new event above the event that the Data Pointer is positioned on. You may then edit the various fields of the newly inserted event to your liking.

## DELETE <DEL>

<**DEL**> allows unwanted MIDI data to be removed from the Track by pressing the <**DEL**> key. You are prompted to confirm that the current event will be deleted.

## EQUAL KEY <=>

The Equal Key <=> will repeat the last function or value change for each field (Time, Data 1, Data 2 or Channel). For instance, if you want to make a group of ragged note-offs all have the same time value, edit the first one and then move to each successive Note-Off and hit <=>. This sets each Time field to the value of the last Time you typed in. Note that the last value for each column (Time, Data 1, Data 2 or Channel) is retained.

## <NEW VALUE>

<**New Value**> means that you may type in a new value and hit <**ENTER**> to change a previous note, beat, velocity or channel value for the current cursor position.

## <CURSOR KEYS>

<**Cursor keys**> means that you may move the cursor (the blinking right and left wedges) to another position using the arrow keys or the <**HOME**>, <**END**>, <**PgUp**> and <**PgDn**> keys.

**<ESC>**

<**ESC**> lets you get out of Edit and abandon any of the edits you may have made.

**<ENTER>**

<**ENTER**> allows you to save the edits you have made and leave Edit mode.

**MIDI EVENT TYPE ABBREVIATIONS**

| | | |
|---|---|---|
| ntn | = | Note-On |
| ntf | = | Note-Off |
| pkp | = | Polyphonic Key Pressure |
| ctl | = | Continuous Controller |
| pgm | = | Program Change |
| aft | = | After Touch (Channel Pressure) |
| pwl | = | Pitch Wheel |

*Comments:*

Texture does not allow identical note values to overlap within the same track. Please read the section entitled **Track Restrictions** for more on this subject.

*Note: Edited changes to a track will not be heard until you close the Edit by typing <**ENTER**>. If you do not wish to keep the results of the updated track you may use **U**ndo outside the Edit environment to restore the original track as it appeared before using the <**F10**> Edit command.*

*See:* MIDI Data Display, MIDI Status Codes, Track Restrictions

*Definition:*

The Clipboard is a place in memory where events may be copied to and retrieved from any track for Cut, Copy and Paste style editing. All Clipboard access must be done in the MIDI Data Display (use **V**iew to toggle to/from the Multi-track display).

Events are tagged using the <`> (left single quote) or <~> (tilde) keys and the <**DEL**> key is used to copy the tagged events to the Clipboard. You may then use the <**INS**> key to copy the contents of the Clipboard to another track or pattern (while in MIDI Data Display).

If the destination track already contains MIDI data, the Clipboard data will be blended in with the existing track data. The left quote key (unshifted) tags single events and the tilde key (same key shifted) is used to tag a region of events.

_ Tagging an event is a toggle action, in other words, to untag an event, tag it again.

*At a Glance:*

When in Pattern Mode:
**V**iew
MIDI Data Display
**cursor keys** *(Move through MIDI Data Display Window)*
**`** or **~** (Left Single Quote or Tilde Keys) *(To Tag Events)*
<**DEL**> *(To Copy Tagged Events to the Clipboard)*
Copying Events to Clipboard; Delete From Source Track?
**Y**es / **N**o >
<**INS**> *(To Copy Clipboard Contents to a New Track)*

*Example:*

You would like to extract selected MIDI events from one track and place them in another. They are separated within the track by events you wish to leave untouched. Position to the source track and, while in the MIDI Data Display, tag the notes you want to extract by using the left single quote <`> key, using the cursor keys to move between events. After you have tagged the events, hit the <**DEL**> key to copy those events to the Clipboard. You will be prompted: **Copying Events to Clipboard; Delete From Source Track? Y**es/ **N**o. This gives you the option of either deleting the tagged events from the source track or leaving them there, similar to the difference between Cut and Copy in other systems. In this case choose <**Y**>es to delete them. The events will then be deleted from the track and copied to the Clipboard. Now go to the destination track (if there is already data in the destination track, the clipboard data will be blended with it). While in the MIDI Data Display, hit the <**INS**> key to copy the events from the Clipboard into the current track. You can repeatedly copy the same data to different tracks and/or different patterns.

*Example:*

You have events in a track which you would like to copy to another track, but they are spread throughout the track. The **C**opy **T**rack command will work, but you'll be stuck will the entire track, not just the events you want. Position to the source track and, while in the MIDI Data Display, cursor to the specific events you wish to copy and tag them using the left single quote key <`>. The <`> is used to tag single events. If you find a "string" of events you wish to tag to the Clipboard, use the tilde <**~**> key to begin the range. Cursor down to the last event you want tagged and hit the <**~**> key again to define the end of the tagged range. You can do this as many times as you like. When you've tagged all the events hit <**DEL**> key to

copy those events to the Clipboard. You will then be prompted with: **Copying Events to Clipboard; Delete From Source Track? Y**es/ **N**o. Since you want to leave the tagged events on this track (and copy them to Clipboard) select **N**o. Now go to the destination track and, while in the MIDI Data Display, hit the <**INS**> key to copy the events from the Clipboard into this track. The Clipboard events are copied to the destination track as well as kept in the source track.

*Comments:*

The Clipboard data will stay intact until you copy new data into it or **Z**ap **C**lipboard.

You can not access the Clipboard when in <**F10**> Edit Mode, Multi-track display or Link Mode.

If you leave the MIDI Data Display or move to another track *before* copying the tagged events to the clipboard, you will effectively *untag* the events you just tagged.

You cannot tag a note-off. To tag a note-off, tag its note-on.

*See:* Blend, Copy, MIDI Data Display, Zap

---

## FILTER / THIN <F9> (PATTERN MODE)

*Definition:*

The Filter/Thin commands enable MIDI Data to be removed from the selected track(s) based on data type, channel or note range. If only one track is selected for filtering, the filtered data can optionally be saved to another track. Filter is a Function Key Command (Pattern Mode, <**F9**>).

You may Filter events by **C**hannel, MIDI **S**tatus Code or **N**ote Range. You may also choose to **T**hin controller, pitch wheel, or after touch information in the selected track(s). All Filter operations can be restricted to a time region within the pattern.

When data is saved to another track via Filter, **any previous data in the destination track is deleted**.

All Filter commands (including Thin) are accessible from the **Global Edit <CTRL-G>** menu and in this context can be used over a range of patterns. When using Filter from the Global Edit menu, you cannot designate a time region. Selected tracks are filtered from beginning to end. See **Global Edit**.

*At A Glance:*

```
When in Pattern Mode:
<F9> Filter
    FILTER TYPE: Channel / Status / Note Range / Thin
    Channel
        FILTER by MIDI Channel # Enter Value >
        FILTER Tracks A-X (Track Map Selection Display)
        Region Begin > (1:00 Default) // End >
            (Pattern End Beat Default)
        Save Filtered Events? Yes / No >
        Save to Track, Enter Letter >
    Status
    FILTER: Event Type
        1. Note-On
        2. Polyphonic Key Pressure
        3. Continuous Controller
        4. pRogram Change
        5. After Touch (Channel Pressure)
        6. Pitch Wheel
        FILTER Tracks A-X (Track Map Selection Display)
        Region Begin > (1:00 Default) // End >
            (Pattern End Beat Default)
        Save Filtered Events? Yes / No >
        Save to Track, Enter Letter >
    Note Range
    FILTER Note Range
        Low Note > / High Note >
        FILTER Tracks A-X (Track Map Selection Display)
        Region Begin > (1:00 Default) // End >
            (Pattern End Beat Default)
        Save Filtered Events? Yes / No >
        Save to Track, Enter Letter >
```

**T**hin
THIN: **C**ontroller / **P**itch Wheel / **A**fter Touch
Enter Letter >
**C**ontroller (0-127) Enter Value >
**P**itch Wheel
**A**fter Touch
THIN BY TIME: Timebase Divisor (1-48) Enter Value>
THIN BY VALUE: Data Resolution divisor (1-32)
Enter Value >
THIN Track(s) Region Begin > / End >

*Comments:*

_ **Channel**: Generally, Filter by **C**hannel is used to separate the data in tracks that contain multi-channel MIDI data.

_ **Note Range**: Filter by **N**ote Range can be used to separate or remove left hand keyboard parts, or to separate or remove an instrument in a drum or percussion part.

_ **Status**: Filter by **S**tatus might be used to remove mod, pitch wheel, after touch or poly key pressure. **T**hin is used to cut down on overhead or memory usage without losing the functionality of controller, pitch wheel or after touch data.

*Note: Filtering by Status Note-On should **not** be used if you want to save the events to another track. Filter by Note Range instead (you can select the entire MIDI note range of C0 to G10 if you like).*

*Example (Filter By Channel):*

Assume that you have a track with embedded multi-channel MIDI data. This may be the result of importing a Standard MIDI file, recording with a MIDI merge device, or a previous blending of tracks. You now want to separate the integrated channels. For this example, we'll say that track A contains MIDI data for channels 1 and 5. We want to leave channel 1 data on track A and move channel 5 data to track D. Start by positioning to track A. Hit <**F9**> Filter, then <**C**> (for **C**hannel), then <**ENTER**> (to select the current track) <**ENTER**> <**ENTER**> (to accept the default region). At the **Save Filtered Events** prompt type **Y**es followed by <**D**> to save the events to track D.

*Example (Status):*

The ability to Filter MIDI data by Status Code can be quite useful. If a keyboard solo is perfect except for the pitch wheel performance, you can simply filter out the pitch wheel and record another take, this time just overdubbing the pitch wheel moves.

To filter by Status, hit <**F9**>, then <**S**> for **S**tatus. The **FILTER: Event Type** window will prompt you to select **N**ote-On, Polyphonic **K**ey Pressure, **C**ontinuous Controller, p**R**ogram Change, **A**fter Touch (Channel Pressure) or **P**itch Wheel. These options may also be selected by using numbers **1** through **6** respectively. After you've selected **P**itch Wheel use the Track Map Selection keys to choose which track(s) you wish to filter. You will then be prompted for the **Region Begin** and **End** beats, and if you wish to **Save Filtered Events?** to another track.

If you chose Filter **C**ontinuous Controller, you are additionally prompted for the controller Number (**0-127**).

*Example (Note Range):*

Press Function Key <**F9**> to invoke Filter. You'll be asked to choose between Filtering by **C**hannel, **S**tatus or **N**ote Range. In this example, press **N**ote Range. You will be prompted for the **Low Note** of the range. Enter the lowest of the range you wish to filter (value, accidental and octave i.e., `c#2, b4, ab6`, etc.) and press <**ENTER**>. Now you'll be asked for the **High Note** of the range. Type in the highest note to filter out and press <**ENTER**> again. Next, use the Track Map Selection keys to choose which tracks to affect, followed by <**ENTER**>. You will then be asked for the region you wish to affect. To select the entire length of the pattern hit <**ENTER**> twice, accepting the default values. Next you will be prompted: **Save Filtered Events? Y**es/ **N**o. Respond with **Y**es and you will be asked to specify to which track you want the Filtered data saved. Type in the appropriate track letter and all notes between and including your designated **Low** and **High** Notes will be filtered out of the original track and saved to the chosen destination track. Only those notes below and above your designated **Low** and **High** notes will remain on the track.

*Example (Thin):*

**T**hin allows you to quickly filter out excess MIDI data that may be doing little more for you than taking up space in memory and in your pattern or song file. From the Filter prompt <**F9**>, type **T**hin. You will see the

prompt **THIN: C**ontroller / **P**itch Wheel / **A**fter Touch **Enter Letter >**. If you select **C**ontroller, you will also be asked which continuous controller number you wish to thin. You will then see the following prompts:

_ **THIN BY TIME: Timebase Divisor (1 - 48)**. Entering **1** here will provide the minimum amount of thinning by time. No more than one of the thinned events will be retained per clock tick. **2** will retain no more than one event for every 2 ticks, etc.

_ **THIN BY VALUE: Data Resolution divisor (1 - 32)**. Entering **1** here will provide the minimum amount of thinning by value. No more than one of the thinned events will be retained at a given value in sequence. In other words, if three adjacent events have the same data, only the first event will be retained. **2** will retain no more than one event for each two sequential data steps. If three adjacent events have the values 87, 88, 89, only 87 and 89 will be kept if your Data Resolution divisor is 2.

A good place to start with most thinning operations would be **THIN BY TIME: 2** and **THIN BY VALUE: 1**. You should rarely need to use any numbers higher than 3 for either value to achieve effective thinning.

_ **U**ndo will reverse a Filter/Thin operation provided that no track data has been changed in Texture since issuing the command.

*See:* Global Edit, Touch Receive

---

## EXCHANGE <X>

*Definition:*

The e**X**change command lets you substitute new note, channel, controller or program events for old ones. The command optionally lets you exchange every *nth* event, designate a group of tracks to affect and designate a region within the pattern to affect.

_ e**X**change **N**ote is often used to change chord inversions, a drum or percussion voice, or the mode of a musical phrase (e.g. major to minor, etc.).

_ e**X**change con**T**roller is used to swap a group of one type of continuous controller data with another (e.g. breath controller to volume controller).

e**X**change is available from the **Global Edit** <**CTRL-G**> menu and in this context can be used over a range of patterns. When using e**X**change from the Global Edit menu, you cannot designate a region (see **Global Edit**).

*At a Glance:*

**X** (e**X**change)
EXCHANGE: **N**ote/ **C**hannel/ con**T**roller/ **P**rogram
Enter Letter >
Tracks A-X *(Track Map Selection Display)*
Old *(Enter Note, Channel #, Controller # or Program #)*
New *(Enter Note, Channel #, Controller # or Program #)*
After Every <Nth> Event > 1 *( Default 1, Enter #)*
Region Begin 1:00 *(Default 1:00)* // End >
*(Pattern End Beat Default)*

*Example (Exchange Notes):*

To exchange notes within a track type <**X**> for e**X**change and then <**N**> for **N**ote. Use the Track Map Selection keys to choose which tracks to affect. You will next be prompted to enter the **Old Note**. Type in the note (value and octave, e.g. C#8) that you want to change followed by <**ENTER**>. Next answer the prompt for the **New Note** value which will replace each occurrence of the Old Note (eg. D8). You will then see the message: **After Every <Nth> Event >1**. This option lets you choose a number, for example 3, that would cause e**X**change to affect only every third occurrence of the old note. If you want all the old notes to become new notes, hit <**ENTER**> to accept the default of **1**. You will then be asked the **Region Begin** and **End** beat boundaries. If you want the whole track to be affected type <**ENTER**> twice to accept the default values. If you want to e**X**change your notes over a particular region of the track, type in the appropriate number plus <**ENTER**> after each prompt.

This same procedure works for e**X**changing **C**hannel, con**T**roller values and **P**rogram numbers.

*Example: Altering Every <Nth> Event:*

The e**X**change command can be used to create some very interesting effects. For example you can take a melody line and have it bounce around to different synths or even from left to right in stereo (if you have two synths on different channels panned hard left and right. Try out the following example:

> With a track assigned to allow all channels <*****>, record a single line part using channel 1. Set up one synth to receive on channel 1 and another on channel 2. E**X**change every second occurrence of channel 1 events with a new designation of channel 2 (e**X**change **C**hannel, select current track, Old Channel = 1, New Channel = 2, Alter Every <Nth> Event = 2, Default Region). In this case, every 2nd note will be sent to channel 2 with all others on channel 1.

*See:* Assign, Chord Flip, Edit <F10>, Global Edit <CTRL-G>

---

## SCALE MENU <F8> (PATTERN MODE)

*Definition:*

Generally speaking, functions accessed by the **Scale** menu cause specific MIDI data bytes to be multiplied by a specified amount. Exceptions to this include the **Tempo** feature and all features available through the **Clip** menu which is accessed as a sub-menu of **Scale**. Scale is available in Pattern Mode by pressing the Function Key <**F8**>, or Globally under the <**CTRL-G**> Global Edit command.

*At A Glance:*

When in Pattern Mode:
<**F8**> Scale
SCALE: Choose Type (Bottom Right Window)
**T**empo
**D**uration
**V**elocity
**P**itch Wheel
**C**ontinuous Controller
**A**fter Touch (Channel Pressure)
Polyphonic **K**ey Pressure
c**L**ip Menu

*Comments:*

When you press <**F8**> from Pattern Mode, you will see a menu with the title **SCALE: Choose Type**. The following is a discussion of the choices available from this menu (which is also accessible from the **Global Edit** menu <**CTRL-G**>). Not included in the following discussion are the **Clip Menu** commands which are discussed in this chapter under the heading **Clip Menu**.

All Scale commands will ask you for the following information:

_ Tracks (A-X) (which tracks to affect)

_ Begin Scale Factor (percentage)

_ End Scale Factor (percentage)

_ Region Begin (beat:sub-beat.tbu)

_ Region End (beat:sub-beat.tbu)

## SCALE FACTOR

Let's talk about *Scale Factor*: This is a percentage applied to the MIDI data you are scaling.

The most common way to use Scale is to apply a constant scale factor to an entire region of one or more tracks.

Let's say you wanted to scale the note velocity data in order to tone down a part that was played too hard for a particular sound module. If you scaled the velocity by 75%, the note velocities would be reduced to three quarters of their original values. To set a constant scale factor in Texture, you would enter **75** as the value for both **Begin** and **End** scale factors. The **Begin** and **End** parameters are used to create a user-defined ramp. If you entered **50** for **Begin Scale Factor** and **200** for **End Scale Factor**, a ramp would be created which multiplies events at the region's beginning by 50%, events at the region's end by 200%, and all in-between events by an amount appropriate to their relative positions in time with regard to the ramp. The following diagram shows what this ramp looks like:

```
       ------- region (time) ------------>
225%

200%           (End Scale Factor) _

175%

150%

125%

100%

75%

50%    _ (Begin Scale Factor)

25%
```

Because there is no curve applied to the ramp, setting **Begin** and **End** to the same amount will yield a constant scale factor applied to the entire region.

Since the most common uses of Scale involve a constant scale value, Texture uses the **Begin Scale Factor** you enter as the default for the **End Scale Factor**. This means that if you want a constant scale factor of **75**, you can simply type **75** in response to the **Begin** prompt and hit <**ENTER**> to accept the same value for **End**.

*Note: The working range of scale factors is 0% to 32,766%.*

## SCALE TEMPO

Tempo Scaling can be used to create *accelerandos* or *decelerandos* to speed up or slow down a region of track(s) by a fixed amount. This

function is accessed from the **Scale** menu <**F8**> by hitting <**T**> for **T**empo. The prompts will vary depending on your responses.

*Here are some examples of tempo scaling:*

_ Scaling tempo by 200% will double the tempo.

_ Scaling tempo by 50% will half the tempo.

_ To create and accelerando over a region, you might enter a **Begin Scale Factor** of 100% (current tempo) and an **End Scale Factor** of a 125% (considerably faster than current).

_ To create a decelerando over a region, you might enter a **Begin Scale Factor** of 100% (current tempo) and an **End Scale Factor** of a 75% (considerably slower than current).

When you use the scale command to affect the tempo of a region, the changes that are made are to the event times themselves, not the master clock. This allows you to embed tempo fluctuations within some tracks without affecting others.

*Example (The Affects of Tempo Scaling):*

Assume a track has only 4 events in it at these times: 1:00.0, 2:00.0, 3:00.0 and 4:00.0. We will scale the region **beginning** at 1:00.0 and **end**ing at 5:00.0.

The following times were obtained with a timebase of 96, they would vary slightly with different timebase settings.

_ Begin and End scale factors of **200%** would change the times to: 1:00.0, 1:12.0., 2:00.0 and 2:12.0 respectively, doubling the tempo.

_ Begin and End scale factors of **50%** would change the times to: 1:00.0, 3:00.0, 5:00.0 and 7:00.0 respectively, cutting the tempo in half.

_ Begin scale factor of **100%** and end scale factor of **200%** would change the times to 1:00.0, 1:22.3, 2:18.0 and 3:10.2 respectively, creating an accelerando.

_ Begin scale factor of **100%** and end scale factor of **50%** would change the times to 1:00.0, 2:03.0, 3:12.0 and 5:03.1 respectively, creating a decelerando.

*Comments (Pattern Length Issues)*

When scaling the tempo of tracks, it is often desirable to change the pattern length to accommodate the shortened or lengthened tracks. Texture will figure out the difference in pattern length and automatically re-dimension the pattern for you if you like.

If the scaled region takes up more room than it previously did, you will be prompted: **Extend Pattern?** This gives you the opportunity to let Texture lengthen the pattern to accommodate the scaled time values, otherwise Texture will throw away any notes that have been re-positioned past the pattern end.

Conversely, if the scaled region takes up less room than it did previously, you will be prompted: **Truncate Pattern?** Be careful here, if you didn't select all tracks, your pattern may contain tracks whose length hasn't changed.

*Comments (Offsetting Post-Region Data)*

If you are changing the tempo of a region which ends before the pattern end, you will have the choice of auto-adjusting the starting point of the data which follows the scaled region. You will be prompted: **Offset Time Values Beyond Region?**. This gives you the opportunity to shift the post region data in the appropriate direction to accommodate the new length of the scaled region.

*When applying tempo scaling less than 100%:*

1. `[-pre-region data-][---region to scale---][-post-region data-]`

2. Tempo in region is scaled by 80% and now takes up more room.

3. Without offset applied (regions overlap):

```
[-pre-region data-][------scaled region------]
                                              [-post-region data-]
```

With offset applied (post-region is pushed back):

```
[-pre-region data-][------scaled region ------][-post-region data-]
```

*When applying tempo scaling greater than 100%:*

1. `[-pre-region data-][---region to scale---][-post-region data-]`

2. Tempo in region is scaled by 120% and now takes up less room.

3. Without offset applied (there is dead space after region):

```
[-pre-region data-][-scaled region-]    [-post-region data-]
```

With offset applied (post-region is moved forward):

```
[-pre-region data-][-scaled region-][-post-region data-]
```

| |
|---|
| *Note: Offset, Extend and Truncate options are not available when Scale Tempo is accessed from the **Global Edit** menu.* |

*Example (Tempo):*

To create an *accelerando* which will gradually increase the tempo of all tracks over an entire pattern by 25% press Function Key <**F8**> to invoke Scale. Choose <**T**> to scale **T**empo. When the **SCALE Tempo** window appears select ALL Tracks (*****) and hit <**ENTER**>. You will be prompted to enter a **Begin Scale Factor** in (%), type **100** followed by <**ENTER**>. This tells Texture that you want to create a ramp which starts at the original tempo. You are then prompted: **End Scale Factor (percentage)**. Since we want an accelerando, type **125** followed by <**ENTER**>. This will create a ramp from 100% to 125% (one quarter faster). The **End** factor becomes the target percentage to be reached by the end of the selected region. Select the region to affect. Accept the **Begin** and **End** defaults by hitting <**ENTER**> twice to affect the entire pattern. With the above settings, you will be asked **Truncate Pattern?**. This is because the pattern would now have a hole at the end where there used to be MIDI data (that data is now being played earlier in the pattern). In most cases, you would want to respond **Y**es to make the pattern dimensions match the tempo scaling.

## SCALE DURATION

Scale Duration is used to change the length of note durations in a region. This is often used to accommodate switching synth patches after a part has been recorded or to adjust percussion gate times.

Typically, you would use this with a constant scale factor (set Begin and End scale factors to identical values).

_ Setting scale factors to 50% will shorten notes to half of their current length.

_ Setting scale factors to 200% will lengthen notes to twice their current length.

*Example (Scale Duration):*

You've found a new synth patch for a part already recorded, but it sounds a bit choppy with the new patch as a result of a shorter release time. Instead of editing the patch, you decide to lengthen the duration of the notes being played and you think an extra 20% should do the trick. Hit <**F8**> to bring up the **Scale** menu. Now hit **D**uration. Use the Track Map Selection keys to designate the proper tracks to scale. At the **Begin Scale Factor** prompt, type **120** <**ENTER**>. After the **End Scale Factor** prompt, you'll see that **120** is already the default, so hit <**ENTER**> to accept this amount. To scale the entire track(s), hit <**ENTER**> <**ENTER**> to accept the default region. All notes in the tracks you selected will now last a fifth longer than they did.

## SCALE VELOCITY (NORMAL)

Probably the most widely used of the Scale options, **V**elocity allows you to adjust the dynamics of a region. Different synth patches will respond differently to different note velocity levels and different keyboards will output different velocity levels when hit with the same force.

The basic operation of velocity scaling is just like the other Scale functions. The Velocity option poses an additional prompt: **SCALE VELOCITY: N**ormal / **D**ynamic. You *won't* want to use the **Dynamic** option in most cases. This option is for those who are trying to squeeze some extra pizazz out of what is otherwise a simple operation and is described in detail below. After selecting **N**ormal, you will be presented with the usual scale options (Tracks, Scale Factors and Region).

*Note: Scale Velocity will not leave any velocities above 127 or below 1 (a note-on velocity of zero turns it into a note off!).*

*Example (Scale Velocity):*

To reduce the overall note velocity of the current track (this would normally make it softer) press Function Key <**F8**> from Pattern mode to invoke Scale (this example assumes you are using a velocity-sensitive MIDI instrument). Choose **V**elocity. You are prompted **SCALE VELOCITY: N**ormal / **D**ynamic. Press **N**ormal. You will now be asked to select the track(s) to affect. Accept the current track by hitting <**ENTER**>. To reduce the note velocities to 60% of their original values type **60** <**ENTER**> in response to the **Begin Scale Factor (percentage)** prompt. Accept the same amount for **End Scale Factor** by hitting <**ENTER**>. Next select the region to affect. To make the entire length of the track softer accept the **Region Begin // End** defaults by hitting <**ENTER**> twice.

*Example (Scale Velocity Using a Ramp):*

To gradually increase the velocities in a track over the entire length of a pattern, Choose **V**elocity from the Scale Menu <**F8**>. At the **SCALE VELOCITY: N**ormal / **D**ynamic prompt, choose **N**ormal. Use the Track Map Selection keys to select the track you wish to scale. Accept the default of **100** at the **Begin Scale Factor** prompt by hitting <**ENTER**>. Now type **175** <**ENTER**> at the **End Scale Factor** prompt. Accept the entire region by hitting <**ENTER**> twice. To scale a region within a pattern in a similar manner, type in the desired region boundaries when prompted for the **Region Begin** and **End** beats.

## SCALE VELOCITY (DYNAMIC)

If you choose **D**ynamic at the **SCALE VELOCITY: N**ormal / **D**ynamic prompt, the next prompt is **Dynamic Velocity Scaling Based On: N**ote Range / Old **V**elocity.

*Dynamic Velocity Scaling Based On Note Range:*

The **N**ote Range choice will cause a lesser amount of Scaling to be applied to *lower pitched* notes.

The amount of scaling applied is based on the relationship of each note to the entire MIDI note range. In other words, C0, which is the lowest MIDI note, would receive no scaling (100%) and G10, which is the highest MIDI note, will be scaled by the current scale factor.

All notes that fall between C0 and G10 are scaled by an amount between 100% and the current scale factor, based on their pitch. The lower the note, the less scaling applied. If you have both Begin and End factors set at 200%, the velocity of the higher notes will be increased more than the lower notes. If Begin and End factors are set at 50%, the velocity of higher notes will be decreased more than the lower notes.

This option can be used to accent higher or lower notes, depending on the polarity of the scale factors. You can use it in conjunction with **Normal** velocity scaling to achieve the affect you desire.

_ It is sometimes helpful to first increase or decrease the velocities overall using **Normal** velocity scaling before applying the **Note Range** option.

*Dynamic Velocity Scaling Based On Old Velocity:*

The Old **V**elocity choice is similar, yet different. The amount of scaling will in this case depend on the *old* velocity of each note. The term *old* is used here to simply make the point that a *new* velocity is derived based on the old value.

A lesser amount of scaling is applied to notes with a lower velocity.

As with the **Note Range** feature, the amount of scaling is based on the old velocity's relationship to the entire range of possible velocities (1 - 127).

A note with a velocity of 1 would receive no scaling (100%) and a note with a velocity of 127 would receive the full treatment (the current scale factor). All velocities between 1 and 127 will be scaled by an amount between 100% and the current scale factor, based on their velocity. The lower the velocity, the less scaling applied.

_ If you have both Begin and End factors set at 200%, the velocity of higher velocity notes will be increased more than lower velocity notes.

_ If Begin and End factors are set at 50%, the velocity of higher velocity notes will be decreased more than the lower velocity notes.

Use this command to make a region more dynamic (scale factors greater than 100%) or less dynamic (scale factors smaller than 100%).

## SCALE PITCH WHEEL

Scaling Pitch Wheel data is very straight forward. In most cases you'll want to use a constant scale factor (setting Begin and End to the same values).

Texture will scale ***around*** the center pitch value of 64 so that the values above and below center pitch are proportionally scaled.

*Note: Pitch Wheel scaling affects only the second data field, which contains the coarse pitch wheel data. Implementation and usage of the first data byte can vary widely between synth manufacturers and is therefore ignored by the scaling routine. In most cases, you should find that this routine is very usable, regardless of which synth you are using.*

*Example (Scale Pitch Wheel):*

Imagine that you've just reassigned a track to a new synth and the pitch wheel is now traveling 4 half steps in either direction on a part that was played using a pitch wheel which traveled 2 steps in either direction. One easy solution is to scale the pitch data of the current track. Hit <**F8**> to bring up the Scale menu. Choose **P**itch Wheel. Hit <**ENTER**> to select the current track. Type **50** <**ENTER**> at the **Begin Scale Factor** prompt. Hit <**ENTER**> to accept the default of **50** at the **End Scale Factor** prompt and hit <**ENTER**>, <**ENTER**> to accept the entire region. Since you scaled the pitch wheel data by 50%, the pitch wheel will now only be traveling half the distance it did, reconstructing the effect present when the part was played with the original synth.

## SCALE CONTINUOUS CONTROLLER

Scale Continuous Controller allows scaling of events such as MIDI Volume, Modulation, and Breath.

After selecting **C**ontinuous Controller from the Scale Menu <**F8**>, you are prompted for **Controller To Scale**. Enter a number between 0 and 120 which matches the controller you wish to scale followed by <**ENTER**>.

The usual series of questions (Track Selection, Scale Factors and Region) follow.

The following are the most commonly used controllers:

| |
|---|
| 1 = Modulation (Mod Wheel)<br>2 = Breath<br>4 = Foot<br>5 = Portamento<br>7 = Volume |

Check your synth manual(s) for supported controllers and their numbers.

*Example (Creating Volume Ramps):*

Assuming the synth you're working with accepts MIDI Volume commands, you can utilize this function to create volume ramps (*crescendos* or *decrescendos*). One way to do this is to select an empty track, insert (<F10> Edit) a bunch of volume events and then use the begin and end scale factors to create the ramp.

## SCALE AFTER TOUCH/POLYPHONIC KEY PRESSURE

For either of these event types, you are prompted to answer the usual series of questions (Track Selection, Scale Factors and Region).

| |
|---|
| *Note: When accessing the Scale menu from the Global Edit menu (<**CTRL-G**> followed by <**S**>), a single Scale Factor is used (instead of "Begin" and "End") with no region designation.* |

_ **U**ndo will reverse a Scale operation provided that no track data has been changed in Texture after the Scale command was issued.

| |
|---|
| *See:* Clip Menu, Edit <F10>, Global Edit |

*Definition:*

The Clip commands allow you to define a *low* and *high* value for a type of MIDI event. The MIDI data values are then adjusted so that any value greater than the high value is set to the high value and any value that is equal to less than the low value is set to the low value. In other words, Clip is used to restrict the range of a type of MIDI event.

To access the clip menu in Pattern Mode press <**F8**> and <**L**> for c**L**ip. Clip Menu choices are: **V**elocity, **P**itch Wheel, **C**ontinuous Controller, **A**fter Touch (Channel Pressure) and polyphonic **K**ey pressure.

The command can be applied to selected tracks within a region of a pattern or can be applied to selected tracks over a range of patterns via <**CTRL-G**> Global Edit.

*At a Glance*

```
When in Pattern Mode:
<F8> Scale
    SCALE: Choose Type
        cLip Menu
        CLIP: Choose Type
            Velocity
                Tracks A-X (Track Map Selection Display)
                Clip Values (0 - 127): Low > High >
                Region Begin > (1:00 Default) // End
                    (Pattern End Beat Default)
            Pitch Wheel
                Tracks A-X (Track Map Selection Display)
                Clip Values (0 - 127): Low > High >
                Region Begin > (1:00 Default) // End
                    (Pattern End Beat Default)
            Continuous Controller
                Tracks A-X (Track Map Selection Display)
                Clip Values (0 - 127): Low > High >
                Region Begin > (1:00 Default) // End
                    (Pattern End Beat Default)
```

**A**fter Touch (Channel Pressure)
Tracks A-X *(Track Map Selection Display)*
Clip Values (0 - 127): Low > High >
Region Begin > *(1:00 Default)* // End
*(Pattern End Beat Default)*
Polyphonic **K**ey Pressure
Tracks A-X *(Track Map Selection Display)*
Clip Values (0 - 127): Low > High >
Region Begin > *(1:00 Default)* // End
*(Pattern End Beat Default)*

*Example (Clip Velocity):*

You have a track that has several notes that were hit too hard and some that weren't hit hard enough. The notes with the velocities over 120 have a harsh sound and the notes with a velocity lower than 40 cannot be heard at all. You would like to remedy the problem without having to go in and Edit each note separately.

Type <**F8**> for the Scale menu followed by <**L**> for the c**L**ip Menu. From the Clip Menu prompt select **V**elocity. You will now be asked to select track(s) from the Track Map Display window. Select only the track(s) you want to c**L**ip. Next, the Clip Values window will pop up. The allowable velocity range is 0-127. Type in **40** after the **Low** prompt to raise the velocities of all notes below 40, and **120** after the **High** prompt to lower the velocities of all notes above 120. After you've entered your Clip Values you will be prompted with: **Region Begin (1:00)**. Accept the default begin and end beats by hitting <**ENTER**> twice to clip the velocities for the entire track(s), or specify a region to clip. All events in the region you selected that had a velocity of lower than 40 will be pushed up to 40, and any events that had a velocity higher than 120 will be pulled down to 120.

_ **U**ndo will reverse a cLip provided that no track data has been changed in Texture since the cLip command was issued.

*See:* Global Edit <CTRL-G>, Scale <F8>

*Definition:*

The Chord Flip command is a quick and easy way to experiment with different chord inversions on the current track.

If you select **U**p this function will automatically take the lowest note of any chords that happen on exactly the same beat and move it one octave up to put it on top of the chord creating the next inversion up. The effect is just the opposite if you select **D**own. You may go through several inversions by issuing the command repeatedly, providing you don't exceed the MIDI note range (C0 - G10).

This command is handy for experimenting with different inversions and voice leading. Chord Flip is invoked by holding down the <**CTRL**> key and then pressing <**F**>.

*At a Glance:*

```
<CTRL-F>
   Flip Chords: Up / Down?
   Enter Letter >
```

*Example:*

You have created a chordal passage but you don't like the way it blends in with the rest of the arrangement. The inversions are wrong. Just use the Chord Flip function to move the inversions up one position. Position to the track in question, type <**CTRL-F**> and then <**U**> for **U**p to the next inversion or <**D**> for **D**own to the next lower chord inversion. Experiment by using the **U**ndo command or by using Chord **F**lip up or down several times until you find something that suits your ear.

*Example:*

You have created a four part string section consisting of chords but the lowest line is too close to the range of the melody. Simply use the Chord Flip function to get the next inversion up. The conflicting line is now an octave higher and no longer conflicts with the melody.

_ You can **U**ndo Clipboard activity provided no changes have been made to track data since the command was issued.

*See:* Edit <F10>, Exchange Note, View

---

## GLOBAL EDIT <CTRL-G>

*Definition:*

Global editing allows the Blend, Copy, Erase, Filter/Thin, Quantize, Scale/Clip, Transpose and Exchange commands to be implemented over a range of patterns. From the Global Edit menu, you may access commands in an environment that will allow you to perform the edit over a defined range of patterns, with certain enhancements and restrictions.

*At A Glance:*

<**CTRL-G**>
GLOBAL EDIT
- **B**lend
  - Tracks: From,To >
- **C**opy
  - Tracks: From,To >
- **E**rase
  - Tracks A - X *(Select Tracks)*
- **F**ilter
  - **C**hannel / **S**tatus / **N**ote Range / **T**hin >
- **Q**uantize
  - Tracks A - X *(Select Tracks)*
- **S**cale
  - **T**empo
  - **D**uration
  - **V**elocity
  - **P**itch Wheel
  - **C**ontinuous Controller
  - **A**fter Touch (Channel Pressure)
  - Polyphonic **K**ey Pressure
  - c**L**ip Menu
- **T**ranspose
  - Tracks A - X *(Select Tracks)*

```
e**X**change
    **N**ote / **C**hannel / con**T**roller / **P**rogram
```

```
GLOBAL EDIT PARAMETERS:
    Pattern Range: Low > (1 Default) High > (96 Default)
    Edit: **A**ll / **C**hannel/Port >
    GLOBAL EDIT CAN'T BE UNDONE: **P**roceed /
        **Q**uicksave First / <**ESC**> to Abort
        Enter Letter >
```

*Comments:*

To make edits over a range of patterns, type <**CTRL-G**> to bring up the Global Edit menu. Use the alpha key sub-commands to access the options available. These options: **B**lend, **C**opy, **E**rase, **F**ilter, **Q**uantize, **S**cale, **T**ranspose, and e**X**change work essentially the same as their non-global counterparts.

After selecting a sub-command, you will be asked a series of questions related to the sub-command you chose. There is a universal rule governing these sub-commands when accessed from the Global Edit Menu: They will not accept a designated time region (Begin and End times for the edit). In other words:

| |
|---|
| All Global Edits will encompass the entire length of each selected track within the designated patterns. |

Region designation is not usually needed or desired during a Global Edit procedure. For information on each sub-command, see its specific section in this manual (**Blend**, **Copy**, **Erase**, etc...).

After you answer the questions related to the specific sub-command you chose, you will be asked a few questions pertinent to the global aspect of the command.

## PATTERN RANGE

You will be asked to define a **Pattern Range**. If you designate the range **Low > 1 High > 5**, patterns 1,2,3,4 and 5 will be affected. You may select the entire Song (1 - 96, which is the default). Empty patterns are not a problem for Global Edit, it will skip through them very quickly.

## EDIT: ALL / CHANNEL/PORT

The next prompt is included with all Global Edit commands except Blend and Copy. You are prompted: **Edit: A**ll / **C**hannel/Port. Answering with **A**ll will result in a "normal" edit: data is edited based on selected tracks and patterns. If you answer with **C**hannel/Port, two additional conditions may be designated for the edit: You will be prompted: **GLOBAL EDIT by MIDI Channel #** and **GLOBAL EDIT by Port #**.

If you enter a MIDI channel number (<**ESC**>, <**ENTER**>, *****, or **0** can be used to bypass or disable either option), only those events which are destined to be output to the channel you designated will be affected, and likewise with the port option. In other words, you could select all tracks and then limit the edit to a specific channel and/or port.

> The channel option takes into account both the channel assigned to each individual MIDI event *and* the *track's* channel assignment (which would take precedence over the individual event assignment if present).

*There are powerful uses for the **C**hannel/Port option:*

For Instance, if you have a multi-channel track and you wish to edit only the events in that track that are assigned to a particular channel, you can select the track for editing, then limit the edit to the channel you have in mind. If you have data directed at a drum machine spread over several tracks that also contain events directed to different devices, you can select all tracks for editing, then limit the edit to the appropriate channel/port assignment of your drum machine.

## PROCEED / QUICKSAVE FIRST / <ESC> TO ABORT

Next, you will see the final prompt which accompanies all Global Edit sub-commands: GLOBAL EDIT CAN'T BE UNDONE: **P**roceed / **Q**uicksave First / <**ESC**> to Abort.

_ Choose **P**roceed if you are confident about the parameters you entered for the Global Edit or have already saved your work to disk. Since **U**ndo can only work on a single pattern, it won't be of much help in the Global Edit world. You will only be able to undo the changes to the last pattern Global Edit processed. This can be useful if you're using a Global Edit command on only one pattern (possibly for the channel/port feature, which isn't available outside of the Global Edit

world). The last pattern processed will be the **High** pattern number you entered in the Pattern Range prompt unless you interrupt the Global Edit process while it's working by hitting <**ESC**> (see below).

_ Choose **Q**uicksave First to save the current song to disk using the current song's name and path before proceeding with the Global Edit. This option is placed here as a convenience in case you forgot to save a copy of the song before you invoked Global Edit. The procedure writes over any existing file with the same name and path, no questions asked, so use this feature with a bit of care.

_ Choose <**ESC**> if you are unsure that you entered the correct parameters or have not copied the song to disk and prefer not to use the Quicksave feature. The Global Edit will not take place.

It is possible to escape from the Global edit process after it has begun. If you hit <**ESC**> while a Global edit is being performed, the process will pause between patterns and ask you if you really want to abandon the operation. Keep in mind that the changes up to the point where you <**ESC**> are a done deed.

*Example (Channel/Port):*

Let's try one example. You would like to erase all of the MIDI data being sent to a particular synth on channel 10, port 1. Access the Global Edit Menu by holding down the <**CTRL**> key and pressing <**G**>. Choose **E**rase. At the Track Map Selection Display prompt, hit <*****> to select all tracks (in this case, we will limit the scope of the erasure by channel and port, not by track). Next, accept the Pattern Range defaults of 1 and 96 by hitting <**ENTER**> twice (this designates the entire song for editing). At the **Edit: A**ll / **C**hannel/Port prompt, choose **C**hannel/Port. At the **GLOBAL EDIT by MIDI Channel #** prompt, type **10** <**ENTER**> to limit the edit to channel 10 events. At the **GLOBAL EDIT by Port #** prompt, type **1** <**ENTER**> to limit the edit to events on port 1. Finally, hit **P**roceed if you are ready to go, **Q**uicksave if you want to save the song first or <**ESC**> to abort the Global Edit.

*See:* Blend <F3>, Copy, Erase, Filter / Thin <F9>, Quantize, Scale / Clip <F8>, Transpose, eXchange, Save

*Definition:*

The Linearize Song Command <**CTRL-L**> will create a large pattern from the patterns which form a song as it exits in Link Mode. This command will retain the following criteria:

_ The number of repeats specified in Link Mode for a particular link.

_ The transposed tracks specified in Link Mode for a particular link.

_ The muted tracks specified in Link Mode for a particular link.

The Linearize Song command will not retain the Rel Tempo settings and will not contain data that may exist in a Linear Pattern (see **Linear Pattern**).

The song you are attempting to Linearize must not exceed the following limitations:

_ No resulting track may exceed 64K in size or contain more than 8190 events.

_ The resulting pattern may not exceed the maximum limit of 2728 beats.

*At a Glance:*

<**CTRL-L**> *(Linearize Song)*
Target Pattern #: >

*Example:*

To Linearize a song, that is, to create a long pattern consisting of the various patterns linked together in Link Mode, hold down the <**CTRL**> key and press <**L**> (from either Pattern or Link Modes). You will be prompted: **Target Pattern #: >**. Enter the number of any blank pattern followed by <**ENTER**>. To see the results, **G**oto the target **P**attern you selected. In the Left Window you will now see an END which will reflect the new Dimension of the Linearized song. You will also notice a drop in the amount of available memory. The top line of the Multi-track display

will now show the name of the target pattern to be the same as the song name. The linked song will remain unchanged.

*Comments:*

The Linearize Song command will overwrite any data that previously existed in the Target Pattern so be sure that the Target Pattern you have chosen is not anything that you need.

DO NOT USE A TARGET PATTERN THAT IS PART OF THE SONG!

*Note: Songs created with versions of Texture previous to version 4.0 may have a problem with the Linearize Song function. If you use the command and find that your new pattern has some timing problems try <**F1**> Dimensioning all the patterns, accepting the **Begin** and **End** beats, before issuing the <**CTRL-L**> command.*

*Standard MIDI Files:*

It is not necessary to use Linearize Song before creating a Standard MIDI File, as this is done automatically when the Standard MIDI File is created. Also, unlike *Linearize Song*, the Standard MIDI File will include the Linear Pattern, if one is present.

_ **U**ndo will reverse the Linearize Song command provided that no track data has been changed in Texture since the command was issued.

*See:* Outline, Linear Pattern, Standard MIDI Files

# CHAPTER 9
# LINK MODE


Overview 1
Link Mode 1
Set Last Link Of Song <**F8**> 4
Assign Pattern to Link <**F1**> 4
Repeat <**F2**> 4
Mute <**F3**> 4
Transpose <**F4**> 4
Rel Tempo <**F5**> 5, 7
Offset 7
Start 7
Rate 7
Insert Links <**F6**> 5
Delete Links <**F7**> 5
Store Links <**F9**> 5
Recall Links <**F10**> 5
Outline <**O**> 9
Linear Pattern 9
Beat 10
End 10
Switching Modes 12

*This chapter covers all the details of creating and working with links to form a song from patterns. The section on working with a Linear Pattern can be considered an advanced topic which you may want to come back to after you've had some experience working with links.*

---

## LINK MODE

*Definition:*

Texture lets you work on different levels of compositional detail. Link Mode is the highest level, enabling you to construct entire songs by "pasting" patterns to links. In addition, each link has special performance over-ride features that allow you to modify the tempo, transpose and mute tracks.

Link Mode is entered from Pattern Mode by pressing the <**TAB**> key (pressing the <**TAB**> key again returns you to Pattern Mode). The Right Window and the Function Key meanings will change. In addition, certain Alpha Numeric Keys and functions are changed (like **C**opy, which now refers to copying a link instead of a pattern or track).

*At A Glance:*

When in Link Mode:

```
<F1> Pattern
   ASSIGN Pattern To Link
      Cursor   Pattern Select
               (or Type Number)
      + or - Change Links
      O  Outline
      L  Linear Pattern
      M Mute LP Tracks
      <F9> <F10>   Store / Recall
      <ENTER> <ESC>   Quit
      >
<F2> Repeat
      REPEAT: Number of Times>
<F3> Mute
      MUTE Track Selection
      Tracks A-X (Track Map Selection Display)
<F4> Transpose
      TRANSPOSE Parameters
      Tracks A-X (Track Map Selection Display)
      Semitones: (Enter Positive or Negative Number)
<F5>  Rel Tempo
      RELATIVE TEMPO Offset
         Enter Value >
      RELATIVE TEMPO Start Beat
         Enter Value >
      RELATIVE TEMPO Rate of Graduation
         Enter Value >
<F6> Insert
      INSERT at Link (Current Setting Default):
      Number of Links >
```

<**F7**> Delete
DELETE at Link *(Current Setting Default)*:
Number of Links >
<**F8**> Last
Set Last Link of Song >
<**F9**> Store
STORE Links 1-99 to Memory: **A** / **B** / **C**
Enter Letter >
<**F10**> Recall
RECALL Links 1-99 to Memory: **A** / **B** / **C**
Enter Letter >

## LINK

A Link is a segment of a song consisting of a reference to a pattern and special programmable performance parameters (Mute, Transpose, Repeat, Rel Tempo). To work with links you must first enter Link Mode by pressing the <**TAB**> key from Pattern Mode. This enables the Link Mode Function Key menu and displays link information in the Right Window.

When playback is invoked from Link Mode, links are played in sequential, ascending order (from Link 1 through the Last scheduled link). There is a maximum of 99 links per song.

Patterns are assigned to links via the Link Menu function <**F1**> (Pattern). Any pattern can be assigned to any number of available links in any order (only one pattern may be referenced per link, however). Links may be inserted, deleted or copied. A link can schedule a pattern to be repeated up to 255 times, can schedule individual tracks to be transposed or muted and can be looped in real time. It can slow the tempo down or speed it up on a graduated slope starting at a designated beat within the pattern. Different link arrangements can be stored in RAM and recalled for comparison.

In addition, you can instruct Texture to **G**oto any link during playback. In this case, Texture finishes playing the current link and then jumps to the link you specified. This feature allows you to rearrange a song on the fly.

After assembling the links of a song, you can create a Linear Pattern which you can record into and playback simultaneously with the linked patterns (see Linear Pattern).

*Note: Link commands only work on link data; i.e. the actual MIDI Pattern data is not changed by transpositions or tempo transitions during link playback. The link options may be thought of as "conducting" choices.*

## LAST LINK

If you are setting up links for the first time in a new song, most Link Mode functions require that you set a "Last Link" for the song before issuing other commands (e.g. for a song to contain thirty links, set Last Link to 30). You can revise the number of the Last Link at any time, it is only necessary that the number is greater than zero to access Link Mode Functions. Set the last Link using the <**F8**> Function Key.

## LINK MODE FUNCTION KEYS

_ The <**F1**> (Pattern) key is where most of the action happens in setting up your links. It is from this sub-menu that you determine which patterns are played in each link. This menu is also used to set the Linear Pattern # and Linear Pattern Mute information. For convenience, the **O**utline function (see **Outline**) and the **S**tore and **R**ecall functions (see <**F9**> and <**F10**> below) are also available from this menu.

_ <**F2**> (Repeat) is used to set the number of times a given link will repeat. The default is 1 (meaning the link will play a total of one time). The range is 1 to 255.

_ <**F3**> (Mute) is used to designate tracks within the current link to be turned off (unheard) for the duration of the link. This can be used to allow variations on the same pattern to be played in different links. A common example would be to mute the strings on a verse early in the song and "bring them in" later in the song. The Mute function lets you do this without keeping two separate versions of the verse in memory. Tracks which are to be muted are displayed as backlit, uppercase letters in the upper Right Window.

*Note: Other muting and soloing functions (including Recall Subgroup, **M**ute, Solo, All, Previous and Flip commands) will affect tracks in both Pattern and Link Mode. However, when a link is played that contains* <**F3**> *Mute generated track muting, these mutes override all other Monitor commands.*

_ <**F4**> (Transpose) is used to modulate the pitch of individual tracks for the duration of a link. This can be very handy for repeating a section of a song after modulating to a new key. The fact that you can choose individual tracks allows for drum and percussion tracks which don't wish to be modulated and other interesting affects.

_ <**F5**> (Relative Tempo) lets you affect the tempo of a link. Use this command to create an offset tempo change at the current link related to the master Tempo of the Song.

_ <**F6**> (Insert) lets you insert any number of links before the current link, limited by a total of 99 links overall.

_ <**F7**> (Delete> deletes any number of existing links starting with the current link.

_ <**F8**> (Last) sets a new value for the last link in the song (e.g. for a total of 23 links, enter the number 23).

_ <**F9**> (Store) allows you to save to memory any three arrangements or different orders of links of a song that may be Recalled at any point for quick comparison. You may save to A, B or C. Note that these arrangements do not get saved with a song file.

_ <**F10**> (Recall) allows you to recall from memory any three arrangements or different orders of links of a song that have been Stored at any point for quick comparison. You may recall from A, B or C.

There is a demonstration song file on your program disk containing an entire Brandenburg Concerto movement (BRAND3). You're encouraged to **L**oad it up and play with it. Trying out the functions on real data is the best way to learn.

## EXAMPLES

*Example <F1> (Assigning Patterns to Links):*

After you have created the patterns associated with a song in Pattern Mode, enter Link Mode by pressing the <**TAB**> key. The contents of the Right Window will display the current link's performance parameters such as Mute, Transpose, Rel Tempo etc. and the Link Mode Function Key Menu will appear at the bottom of the screen. In addition, the top line of

the Right Window displays the number of the current link as well as the number of the last link in the Song.

As a default, Texture assigns Pattern 1 to all links and sets the Last Link to **0** (this means Link Mode is disabled). If you try and access any link functions other than **Insert** or **Last**, you'll usually get the message **Set Last Link to New Number**. So that's where we'll begin:

Use <**F8**> (Last) to **Set Last Link of Song >**. Type in a number (1 - 99) large enough to accommodate all the patterns you want to link together (you can change this number any time, so don't worry about the value now, set it on the high side) and hit <**ENTER**>. Press Function Key <**F1**> to assign patterns to links. The **ASSIGN Pattern to Link** menu appears. If you like, you can view a list of active patterns or links any time by hitting **O**utline **P**atterns or **O**utline **L**inks.

Type the **number** of the Pattern you want to start your song, followed by <**ENTER**>. This pattern will now be assigned to Link 1, and will be displayed in the upper Right window after the word **Pattern**. Press the <+> key to advance to Link 2. Continue to advance through the links, assigning patterns to links to create your song structure. When you are done hit <**ENTER**>, <**ESC**> or **Q**uit to close the **ASSIGN Pattern** menu.

**G**oto **L**ink 1 to **P**lay the newly created song.

*Example <F2> (Repeating Links):*

To add repetitions to a Link, **G**oto the particular **L**ink (or use the <+> or <-> keys), and press <**F2**> Repeat. At the **REPEAT: Number of Times >** prompt, type the number and press <**ENTER**>. The number of repeats will be displayed in the Right window
after the word **Repeat**.

| Notice that one time through a Link is listed as Repeat 1. |
|---|

*Example <F3> (Mute):*

Press Function Key <**F3**> to invoke Mute. Use the Track Map Selection keys to select tracks for **M**uting. The Mute Display in the upper Right Window will show the current muted tracks as uppercase, backlit letters.

*Note: As previously stated, a track will not send data if it has either been muted via <**F3**> or other Mute/Monitor commands (see **Mute/Monitor**).*

*Example <F4> (Transpose):*

To transpose a link, **G**oto the Link and press <**F4**> Transpose. Use the Track Map Selection keys to select the particular tracks to transpose. Now you will be asked to enter the number of semitones to transpose. Type a number followed by <**ENTER**> (transposing up requires no <+> sign; transposing down requires a minus sign before the number). Note that transposing during Link Mode does not actually alter the note data in the original pattern; it merely adds (or subtracts) the transposition to the notes just before they are output to the MIDI port(s).

*Comments and Example <F5> Rel Tempo:*

The "Relative" part means that the number you type in when prompted **RELATIVE TEMPO Offset** will be added to the Master Tempo (shown in the upper left window). In other words, if your Master Tempo is **120**, setting Relative Tempo to **10** will produce a tempo at the current link of **130** Beats Per Minute. Likewise, setting the Relative Tempo to **-10** will produce a tempo of **110**. If you simply want the entire link to play at one tempo, you can ignore the next two prompts (hitting <**ESC**> will do this).

The next prompt: **RELATIVE TEMPO Start Beat**, lets you select a beat within the link to start the tempo change. For example, entering **5** here would cause the Relative Tempo to kick in at beat 5 of the current Link.

The final optional parameter is: **RELATIVE TEMPO Rate of Graduation**. This allows you to set up a tempo ramp, creating a smooth transition between tempos. The default of **0** will create no ramp. The effective range of this parameter is 1 - 255. For every beat after **Start Beat**, the tempo is adjusted by the amount of **Rate** towards the Relative Tempo **Offset**. In the following examples, **Beat** refers to the beat within the current link.

*Example (Decelerando):*

| | | |
|---|---|---|
| Master Tempo: 95 | | |
| Rel Tempo:-10 | Start:1 | Rate:2 |

| Beat | Tempo |
|---|---|
| 1 | 95 (start of tempo ramp) |
| 2 | 93 (subtract rate: 95 - 2 = 93) |
| 3 | 91 (93 - 2 = 91) |
| 4 | 89 (91 - 2 = 89) |
| 5 | 87 (89 - 2 = 87) |
| 6 | 85 (87 - 2 = target tempo of 85) |
| 7 | 85 (don't fall below 95 - 10, end of ramp) |

*Example (Accelerando):*

Master Tempo: 132
Rel Tempo:5 Start:12 Rate:1

| Beat | Tempo |
|---|---|
| 1 | 132 (tempo ramp doesn't start until Start Beat 12) |
| _ | _ |
| 12 | 132 (ramp begins here) |
| 13 | 133 (add rate: 132 + 1 = 133) |
| 14 | 134 (133 + 1 = 134) |
| 15 | 135 (134 + 1 = 135) |
| 16 | 136 (135 + 1 = 136) |
| 17 | 137 (136 + 1 = 137) |
| 18 | 137 (tops out at 132 + 5, end of ramp) |

For other ways of creating Tempo ramps, see the section entitled **Tempo** under the heading **Scale** <**F8**>.

*Note: The Relative Tempo parameters affect **only** the link where they are invoked. To affect subsequent links, ayou must also set the Relative Tempo parameters on those links. In other words, Relative Tempos are not held until changed, but held until the end of the link on which they were invoked.*

*Example <F6> (Insert):*

To insert extra Links into your song, first **G**oto the **L**ink which would *follow* your inserted links. Press <**F6**> Insert. You will be prompted: **INSERT at Link** *(current link #)***: Number of Links >**. Type in the number of links you wish to insert before this current link and hit <**ENTER**>. The new link(s) will be written to the current location and all subsequent links will be pushed back. Texture assigns Pattern 1 to the new

links as a default. The Last Link display field at the top of the Right Window will now indicate the change in number.

Use the Pattern assign command <**F1**> from the Link Menu) to assign your inserted links to specific patterns. You may delete links via <**F7**> Delete.

*See:* Linear Pattern

---

**OUTLINE <O>**

*Definition:*

The **O**utline command displays the currently active links or patterns. **O**utline is an Alpha Key Command. See the reference to **O**utline in Chapter 5: **Screen Display & User Interface** for more details.

*At A Glance:*

**O**utline
OUTLINE: **L**inks / **P**atterns Enter Letter >
PATTERNS *(Outline Window, Lower left)*
LINKS *(Outline Window, Lower left)*

*Definition:*

The Linear Pattern can be any one of Texture's 96 patterns. It will play simultaneously to your linked patterns in Link Mode. You can also record into any tracks in the Linear Pattern while playing in Link Mode. This effectively gives you 48 total tracks in Link Mode and the ability to record solos or percussion parts "on top" of your linked patterns.

Linear Pattern recording is especially useful for "overdubbing" free-form parts on top of an otherwise structured song. When in Pattern Mode, the Linear Pattern is just like any other pattern. You can **V**iew, <**F10**> Edit, or use any of the various commands to affect data in the Linear Pattern.

*Note: Do not confuse the **Linear Pattern** implementation with the **Linearize Song** function. These are two different creatures that both deal with removing limitations that are naturally imposed by pattern based sequencing. The **Linear Pattern** is an add-on to your linked patterns, contrary to the process of **Linearization** (the result of Linearize Song), which creates one long pattern based on your linked patterns.*

*At a Glance:*

When in Link Mode:
<**F1**> Pattern
ASSIGN Pattern to Link
**L** Linear Pattern Number (0 - 96, 0 = Off)
Enter Value > *(Current #)*
**M** Mute LP Tracks
Mute Linear Ptn Tracks *(Track Map Selection Display)*

*Comments:*

The Link Window (bottom right) displays the Linear Pattern number (use **0** for no Linear Pattern or to turn it off temporarily).

_ **Beat** refers to the current beat of the Linear Pattern at all times. If you watch this counter, you will notice that no matter what you do in real time (**L**oop, **G**oto **L**ink, etc.), the Linear Pattern keeps moving forward. This counter is incremented regardless of whether a Linear Pattern is assigned or not.

_ **End** simply displays the end beat of the Linear Pattern.

_ Directly under the **Beat** indicator is a Track Mute Map for the Linear Pattern. This displays which Linear Pattern Tracks you have designated to be silent during the playback.

To set the Linear Pattern parameters, use the <**F1**> Pattern command in Link Mode. <**L**> (**L**inear Pattern) lets you set the Linear Pattern number, while <**M**> lets you designate which Linear Pattern Tracks to **M**ute.

Unless you've changed it, the default end beat of an empty pattern will be 1000:00, which should be sufficient for most applications (you can change

the end beat by re-dimensioning the Linear Pattern in Pattern Mode using <**F1**> Dimension).

After entering the Linear Pattern number by pressing <**F1**> followed by <**L**> for Linear Pattern # you will see the results listed in the Link Mode Window (bottom right) as **Linear Ptn** <number>.

*Example (Recording):*

To record in Link Mode, assign a Linear Pattern (<**F1**>, then **L**inear). Next, position to the track and beat you wish to record into. You may use the same keys for track positioning that you use in Pattern Mode (the angle bracket keys (< and >) are used to position to an adjacent track and the semi-colon key <**;**> brings up the **Select Current Track (A - X)** prompt). The current track name and assignment is shown in the Left Window just above the word **Quantize**. Use the **G**oto **L**ink and/or the **G**oto **B**eat commands to position to the place in the song you wish to start recording. Hit **RR**ecord just as you would in Pattern Mode to start recording and <**SPACE**> to stop or pause. To hear what you've recorded, hit **P**lay. (Play will start on the first beat of the Link where you started recording. For a more precise start location, pre-locate to the link/beat before hitting **P**lay).

The above steps represent one of several possible ways of recording in Link Mode. You can record in Link Mode using real time Punch In/Out and AutoPunch just as you would in Pattern Mode. You may also record and playback the Linear Pattern while in Pattern Mode but you won't have the benefit of hearing the linked patterns.

| |
|---|
| You may record on any of the 24 tracks but keep in mind that track names and assignments remain the same between ALL patterns, including the Linear Pattern. |

*Example (Mute Linear Pattern):*

Tracks which are muted using the Mute/Monitor or <**F3**> (Mute) commands have no affect on the Linear Pattern when in Link mode.

To mute tracks in your Linear Pattern, hit <**F1**> Pattern when in Link Mode. From the **ASSIGN Pattern to Link** menu prompt, select **M**ute. Use the Track Map Selection keys to select the tracks you wish to mute. When you have finished hit <**ENTER**>. Your selection will be displayed

in the Linear Pattern section of the lower Right Window. To mute an entire Linear Pattern, temporarily assign **0** as the Linear Pattern.

## SWITCHING MODES

You may find that you want to bounce back and forth a lot between Pattern and Link modes when working with a Linear Pattern in order to perform various edit operations on the MIDI data in the Linear Pattern. What follows may be helpful:

When a Linear Pattern is designated as anything other than **0** (off), using the <**TAB**> key from Link Mode will always take you to the Linear Pattern in Pattern Mode. In other words, if you set the Linear Pattern to be pattern 96, when in Link Mode, hitting <**TAB**> will take you to Pattern Mode and you will be positioned at pattern 96. This is contrary to the results you would get if no Linear Pattern were designated. In that case hitting <**TAB**> would take you to Pattern Mode and you would be positioned at whatever pattern is assigned to the current link. As you may have surmised, Texture is doing a bit of guessing as to where you would like to end up when you hit the <**TAB**> key. Since that will not always be where you really want to be, you can move to the pattern of your choice (from Link Mode to Pattern Mode) very quickly by typing **G**oto **P**attern <pattern #> <**ENTER**>. This is the same command you would use from Pattern Mode. In either case, hitting <**TAB**> again will take you back to the last link you were positioned on in Link Mode.

*Comments:*

| |
|---|
| The Linear Pattern plays independently of any real time **G**oto **L**ink or **L**oop commands you might issue. |

If you are in playback in Link Mode and you **L**oop the current link, the current link will loop but the Linear Pattern will keep moving forward.

Remember to Dimension (<**F1**> Pattern Mode) the Linear Pattern large enough to accommodate the number of beats from the start of the song through the end of the region you want to "overdub".

When in Link Mode, standard Mute/Monitor (solo) commands DON'T affect the Linear Pattern. Use the Linear Pattern Track Mute Map to do this. To mute the entire Linear Pattern, simply enter **0** for the Linear Pattern number.

_ The Linear Pattern Number and Track Mute Map are saved with the song file.

*See:* Edit <F10>, Goto, Loop, Record, Play, Track Muting/Monitoring

# CHAPTER 10
# SYNCHRONIZATION


Overview 1
Sync <**8**> 1
Sync Options 2
INTernal Sync 3
MIDI Sync 3
To External Device 4
SMPTE & MIDI Song Position Pointer 4
Smart FSK 5
Striping 5
Reading 6
Delay 6
Tape Sync 7
FSK 7
Striping 7
Reading 8
Advance <**9>** 9

# SYNCHRONIZATION

*This chapter discusses the synchronization modes available when using an MPU-401, MPU-IPC or compatible MIDI interface. If you have an MQX-16, MQX-16S, MQX-32 or a Yamaha C1, you will also want to refer to the appropriate appendix at the back of this manual. It is also possible that support has been added for interfaces from other manufacturers since this writing. Be sure to check the README file for any new support documentation.*

> *Note: You only need to use a SYNC mode other than INTernal (the default) if you are trying to synchronize Texture with another device that plays or records, such as a tape machine or external sequencer.*

---

**SYNC <8>**

*Definition:*

To achieve synchronization (hereafter called *sync*) is to successfully cause two or more devices to play at the same time and speed, with all devices starting and stopping together. Crude sync can sometimes be obtained by setting two devices to the same tempo and hitting their play buttons simultaneously. Unfortunately, even if you get them to start together, odds are they will drift apart very quickly, making this type of sync almost useless. For those who need a reliable form of sync, the devices being used must be able to talk to each other.

In most sync setups, one device is setup to be the *master* and the other devices the *slaves*.

_ The master is always the timekeeper, providing clock ticks of one type or another.

_ The slaves are responsible for listening and responding appropriately to the clock ticks.

Another term used here will be the word *drive*. For the purposes of this discussion, a slave device is always *driven* by the master device.

In some cases the clock ticks mark time in minutes, seconds and parts of seconds. In other cases the rate of clock ticks represents a MIDI tempo. Often, the master will send commands to the slaves such as Start, Stop, Continue and Locate.

The two forms of external sync we will discuss here are **MIDI** sync and **Tape** (FSK) sync (SMPTE and MIDI Time Code sync are discussed in the hardware appendicies).

_ FSK stands for Frequency Sync Key and was designed for writing to and reading from a tape recorder.

_ MIDI sync is used for sync communication between MIDI devices.

> The heart of MIDI sync is the MIDI Clock message which simply marks the passage of one 24th of a beat.

Many devices will convert FSK, smart FSK and/or SMPTE to MIDI sync and vice-versa.

## SYNC OPTIONS

In this section we will discuss the options that are standard for any true MPU-401 compatible interface. The options are: **INT**ernal, **Tape** (FSK) and **MIDI**. We will also discuss sync using *MIDI Song Position Pointer* which is generated by *Smart FSK* devices and some *SMPTE* devices. This method of location is received through MIDI and therefore supported regardless of your hardware setup.

> In Texture, the **Sync** menu is accessed by hitting number key <**8**>. The Sync options will vary with different hardware combinations. In some cases the menu choices will vary depending on the hardware you have installed and in other cases certain menu options presented may not be available with your hardware.

If you are using special hardware that is supported by Texture, you should also consult the appendix near the end of this manual which refers to the hardware in question. At the time of this writing, Music Quest cards, Computer Music Supply (CMS) cards and the Yamaha C1 each have their own appendix to discuss what is and isn't supported when used with Texture. (We reserve the right to add or drop support of hardware devices as we see fit.) If you haven't already done so, you should also consult the

README file for any last minute changes in this department (see the index entry for README).

> *Note: Many MPU-401 compatible interfaces do not offer support for the Tape (FSK) sync option. Even though it is shown as a menu choice in Texture, if your interface has no **Tape In** and **Tape Out** jacks, it probably doesn't support tape sync. Conversely, there may be sync options added to an MPU-401 compatible interface that Texture does not support. If it's not covered here, in one of the appendices or in the README file, it probably won't work with Texture.*

The current sync mode in effect is displayed in the bottom left window next to the word **SYNC**.

*At A Glance:*

```
Standard MPU-401 Menu:
8  Sync
   SYNC: 1.INT 2.TAPE 3.MIDI
   Enter Number >
```

**INTERNAL SYNC**

Select <**1**> **INT** from the Sync menu <**8**>. This is the default sync mode where all timing is controlled from within Texture itself. In this mode, Texture transmits MIDI clock, start, stop and continue commands and can be used to drive other MIDI clock-driven devices.

When Play, Record or Continue (<**SPACE**>) commands are issued when positioned at the start beat of a pattern or link, Texture transmits a MIDI Start command. When continue is issued from any other beat position, Texture transmits a MIDI Continue command. MIDI Clocks are always sent when in internal sync regardless of the play state.

> *Note: At the time of this writing, Texture receives but does not **transmit** MIDI Song Position Pointer.*

**MIDI SYNC**

Select <**3**> **MIDI** from the Sync Menu <**8**>. Texture can synchronize to any MIDI device which transmits MIDI clocks. Most MIDI drum

machines and keyboards with built in sequencers can be used to drive Texture. In this mode, Texture will respond to MIDI Clocks and derive its tempo from them. In other words, when using MIDI sync, the tempo, speed and relative tempo settings have no meaning.

Texture will, in this mode, respond to MIDI Start, Stop, Continue and Song Position Pointer messages. The Start message is always responded to as Continue, since this allows greater flexibility when working with devices which don't have a Continue command (you can manually set Texture to any beat you want if Continue is not desired).

*IMPORTANT!: When using MIDI sync, always issue the command <**CTRL-HOME**> before starting Texture from an external device if you wish to start from the beginning of a song or pattern. This is true **even if the start beat is already set to 1:00.***

To record while in MIDI sync, either hit <**R**> once before rolling the tape for immediate record mode or use manual Punch In/Out or AutoPunch techniques.

*Example (MIDI Sync to External Device):*

Connect the MIDI OUT of an external MIDI device such as a MIDI drum machine or sequencer to your computer's MIDI IN. Hit <**8**> (Sync) followed by the menu choice for MIDI sync (usually <**3**> but may vary with hardware).

You should now be able to start and stop Texture from the external MIDI device. The tempo of the Texture sequence, beat counter and metronome should change as you adjust the tempo of the external device.

_ Note: The Texture TEMPO indicator will not reflect current tempo in this mode.

Remember to hit <**CTRL-HOME**> before starting Texture from the external device if you wish to start at the beginning of the song or pattern.

*MIDI Sync and MIDI Song Postion Pointer:*

In addition to being driven by another sequencer or drum machine, MIDI sync is used by many specialized devices for sync to tape. These devices generally fall into one of two categories (some may do both):

_ Devices which write/read **Smart FSK**.

_ Devices which write/read **SMPTE**.

After striping the tape, the device can send **Song Position Pointer** (SPP) information to Texture from any start location on the tape. Texture can then locate to the correct location. The result is that you can position the tape anywhere in the song and start playback, with Texture automatically locating and synching to the tape.

When using such a device, Texture playback can be controlled completely via the tape transport mechanism. You needn't tell Texture to Play or Stop; just start and stop the tape where you want.

_ You can also record or punch-in in this mode.

There is one exception:

> *When you position the tape to the very start of the song* the device won't issue an SPP, just a Start command. To start correctly at the top of the song, you must issue the <**CTRL-HOME**> command first. There is a simple work-around to this if you find it cumbersome:
>
> Before striping the tape, insert an empty pattern at the beginning of the song. The length is up to you but should be long enough to allow you to easily locate the tape within it, once you've recorded the sync track. The idea is that if you locate the tape to this empty pattern, before the song has actually started but past the initial Play command, you don't need to hit <**CTRL-HOME**>. This is now a locate like any other locate.

Since these devices are all unique and are available from many different manufacturers, we will not attempt to instruct you on the use of any one particular device. What follows are some general rules for using these devices with Texture.

*Smart FSK:*

These devices will require that you play Texture in internal mode (**1 INT**) while they stripe a track on your tape machine. They use Texture's MIDI clock information to generate an FSK stripe which mirrors the tempo information in your pattern or song. The FSK stripe usually contains embeded MIDI Song Position Pointer information.

*Striping Tape:*

To stripe, follow the manufacturer's guidelines on how to connect your MIDI cords, etc.. Set Texture to **1 INT** sync. ALWAYS hit <**CTRL-HOME**> before **P**lay (this has an affect on accuracy). If the device that you're using didn't provide much helpful information on tape striping, you may want to read over the section below under **Tape Sync** which discusses striping a tape for use with Tape Sync mode.

*Reading the FSK Stripe:*

To sync to tape, first follow the manufacturer's instructions on wiring and other hardware specific issues. Here are some rules that apply to Texture in this mode:

When you wish to start from the begining of the song or pattern, hit <**CTRL-HOME**> before starting the tape. You need not hit **P**lay on your computer keyboard. Simply hit Play on your tape machine and Texture should respond at the correct time.

To locate to Song Postion Pointer, forward the tape to any location in the song and hit Play on the tape machine. After a brief period, Texture should *lock* to the correct location within the song or pattern.

_ **Delay**: Some SPP devices allow very little time for the sequencer (in this case Texture) to process the message and prepare for the incoming Start command. Texture will add a minimum of 1 second to the locate time provided by the device, allowing what is in most cases ample time for Texture to prepare. Depending on several factors (computer speed, data density, locate point, status of controller chasing, etc...) the one second *delay* may not be enough.

_ You can increase the amount of Texture's global **D**elay variable from the Chase Events menu <**CTRL-C**>. This value represents seconds and when an SPP is received will allow Texture more or less time to locate

before playback starts. Even when set to 0, there is a one second delay. The allowable entry range is 0 - 10 seconds. You will start to see a difference in response time with entries of 2 seconds or greater. (See the section entitled **Event Chase Table** in the **Recording and Playback** chapter.)

*Note: The global Delay Time has different ramifications in differnt sync modes, depending on the setting of other state switches such as Chase Events Enabled and Default MIDI Programs Send On Play/Rec. See the description of* ***Delay Time*** *in the* ***Recording and Playback*** *chapter.*

## TAPE SYNC

The **Tape** or FSK Sync mode using the MPU-401 or compatible interface is now considered a rather old fashioned method of synchronization. There are two basic drawbacks to using this mode:

_ You must always start playback from the beginning of the song since FSK contains no location information, just a simple pulse.

_ There is no elegant recovery from even the smallest tape drop-out, usually forcing you to start over using a fresh piece of tape.

This is not to say that this mode isn't usable. It is a solid format that has been used by many people on a regular basis with excellent results. It simply is not the most elegant format available. If you don't have a dedicated Smart FSK or SMPTE to MIDI converter, and your MIDI interface supports only regular FSK, you have no other choice.

*Striping Tape:*

There are many exceptions to the following guidelines that would be totally acceptable in some cases. Read our suggestions and follow them when you can. Further experimentation should tell you what you can and can't do with respect to your particular setup and needs.

It is assumed that you have a tape recorder of some sort with two or more tracks which can be recorded onto individually (this feature distinguishes the recorder as a *multi-track* machine). It is prudent to select an *outside* track (for instance, track 1 or 8 on an eight track machine) as your sync track.

Before recording any music, you will want to stripe the tape. Connect the **Tape Out** jack to the audio input of your sync track on the tape machine (shielded cable is a must - normal audio conectors should work fine).

_ Use fresh tape if possible.

_ Do not use any EQ or noise reduction on the sync track. If your tape machine doesn't allow you to turn off noise reduction on just one track, you will have to leave it on and hope for the best, or leave it off and record your other tracks without noise reduction (unfortunately, the machines that need it the most don't usually give you the option of disabling it on one track only).

With Texture in Internal Sync (**INT**) and stopped, check the level for the sync track on your tape machine's VU indicator. Every setup is a little different, but a common setting for FSK tones is -10 VU. This too might take some experimentation. If the signal is too hot, it will probably bleed onto a neighboring track, if it's too weak, it may not work reliably, especially if there is a dynamic part recorded on a neighboring track.

When Texture is in stop mode, a *pilot* tone is generated to Tape Out. It is important to have plenty of pilot tone on the tape before the song begins. We recommend a minimum of 10 seconds.

Whether you are using Patern or Link mode, start by hitting <**CTRL-HOME**> before rolling the tape.

_ Next, ready the sync track for recording and roll the tape.

_ After at least 10 seconds have passed, hit **P**lay in Texture and take note of the location of the tape.

_ You should not at this time be recording any music to tape, just the FSK stripe. Continue striping the tape until the song has finished playing.

*Reading the FSK Stripe:*

Connect the **Tape In** jack on your MIDI interface to the output of the sync track on your tape machine. As with striping, disable any EQ and noise reduction if possible (if you found that you had to record the stripe with noise reduction on, leave it on now).

Hook up whatever MIDI devices will now be recorded and route their audio outputs (via mixers, patching, etc) to empty tracks of your tape recorder.

If possible, leave at least one track open between the sync track and the first music track when working with an analog multi-track deck. This helps cut down on possible cross-talk interference which may affect adjacent tracks, especially on tape decks with narrow tape track formats.

Put Texture into Tape Sync mode by selecting the **TAPE** option from the Sync menu (usually option #2).

_ Rewind the tape to the beginning of the stripe. Be careful to position the tape somewhere **before** the point when you hit **P**lay during striping.

_ Hit <**CTRL-HOME**> to ready Texture for playback.

_ Put the tape machine into record.

_ Somewhere *after* the pilot sync tone starts and *before* the song start point, hit **P**lay in Texture. After you hit **P**lay, Texture will wait for the FSK tone to indicate the start of playback before playing back.

You can continue to rewind and play as many times as you like. This process can be used to build or replace tracks. It can also be used to add extra MIDI tracks to a mixdown after you've filled all your tape tracks. It is not unusual to start by laying down a reference track of the MIDI instruments, record vocals, guitar, etc.. Then mix to a two track machine with Texture playing the MIDI instruments *live* to the mix.

*See:* Appendix, Chase Events <CTRL-C>, README File, SMPTE <CTRL-P>

---

**ADVANCE <9>**

*Definition:*

Advance <**9**> enables playback of an entire Texture song or pattern to begin early or late. Advance is typically used during sync-to-tape procedures (FSK sync only) in order to adjust the start time of playback.

Advance is invoked by pressing Number Key <**9**>. The amount of Advance before beat 1:00 is expressed in subbeats (subbeats are equivalent to MIDI clocks; you cannot advance by Timebase Units). The current amount of Advance is displayed in the bottom panel of the Left Window.

The allowable range is -99 to +99. Positive numbers will cause playback to start early and negative numbers will cause playback to start late. When using positive numbers, you must allow enough time in the count-in (see **Count**) to accommodate the number of subbeats you are advancing by.

*At A Glance:*

| |
|---|
| **9** Advance<br>ADVANCE Playback: Number of Subbeats<br>Enter Value > *(-99 to +99)* |

*Example:*

Let's assume you are working on a multitrack synthesizer composition using Texture. Already, you have laid down FSK Tape sync on one tape track and, using the Sync-to-Tape procedures (with a four beat Count), have recorded one track into Texture with a bell-like tone color. Now, you wish to record onto tape brass tracks that you created with Texture. However, after you set up your synthesizer for the appropriate sound and sync Texture to tape, you discover that all the brass attacks sound late when played against the bell sound. Even though the synthesizer is being synchronized precisely to the pre-recorded material, brass sounds have a slower-rising attack than a typical bell sound. In order to line up the brass attacks without altering the synthesizer settings or using Texture's <**F5**> Block Move command, go to your computer keyboard and type: **9**. You will be prompted to enter the number of subbeats that you wish to Advance playback. Since it sounds like the attacks are about a sixteenth note late, type: **6** <**ENTER**>. For the next playback, you will hear Texture begin playing at the last sixteenth-note of Count Beat #4. If the brass attacks are still not in line, change the Advance setting earlier or later to get the result you want.

*Comments:*

| |
|---|
| <**4**> Count must be enabled in order to use Advance. |

The total amount of Advance available is less than or equal to the number of count beats. For example, with a two-beat count-off, you may set an Advance anywhere from 0 to 48 subbeats. Advance is disabled by setting its value to 0 (zero).

Typing a negative number for Advance will produce a delay.

Advance affects all tracks simultaneously. You cannot use the Advance function to do individual track skewing.

*See:* Block Move, Count, Sync

# APPENDIX I
## HELP DISPLAY

*Note: The actual Help file may vary with different versions of Texture such as the Yamaha C1 version or revisions may take place after this manual has been written. The listing below was taken from Texture v4.22 for MPU 401 and compatible interfaces.*

---

**HELP <H>**

TEXTURE Help Utility

A_ssign

| | |
|---|---|
| Channel | Assign A MIDI Channel to Track(s) |
| Port | Assign a Port # to Track(s) |
| Program | Assign a Default Program to a Channel/Port |

Combination

---

| | |
|---|---|
| B_uffer | Access the Record Buffer |
| C_opy | Copy Track(s), Pattern, Link |
| D_uration | (Default) Set Length of Inactive Patterns |
| E_rase | Blank Region on Selected Tracks |

---

F_ile Menu:

| | |
|---|---|
| Drive | Default Disk Drive |
| Erase | Erase a Song or Pattern File |
| Files | Browse/Load Existing Files |
| Load | Load a Song or Pattern From Disk |
| MidiFiles | Load or Save a Standard Midi File |
| New | Clear Song Memory |
| Path | Select a New Directory |
| QuickSave | Save Song to Disk (one step version) |
| Save | Save a Song or Pattern to Disk |
| External | Load a Program on Top of Texture |

---

| | |
|---|---|
| G_oto | Locate Link, Pattern or Beat |
| H_elp | Invoke Help Utility |
| I_ntro | Toggle Metro/Count |
| J_ump | Pre-Locate to Start Beat |
| L_oop | Enable/Disable Pattern Loop |
| M_ute | Select/Deselect Track |
| N_ame | Label Pattern or Track |
| O_utline | Show List of Patterns or Links |
| P_lay | Start/Stop Playback |

---

Q_uantize:

| | |
|---|---|
| Track | "Quick" Quantize Entire Track |
| w/Options | Quantize Specified Region in Track(s) |
| 1-6 | Select Quantize Preset |
| Edit | Modify Quantize Prset |
| Copy | Copy Preset to Preset |
| Delete | Delete Preset |

---

R_ecord Double Hit From STOP to Start Recording One Hit
While Playing to Punch-In or Out

| | |
|---|---|
| S_ubgroup | View/Save Track Select Subgroups |
| T_empo | Set Master Tempo for Song |
| U_ndo | Reverse Last Change Pattern |
| V_iew | Switch Multi-Track Display/MIDI Data Display |
| eX_change | "Swap" Note/Channel/Controller/Program in Track(s) |
| Z_ap | Patterns/Track Names/Clipboard/Undo |

---

<Shift> 1
Through Recall Subgroup
<Shift> 7

---

| | |
|---|---|
| SPACE | Stop/Continue Playback |
| Up Arrow | Move to Adjacent Track Forward |
| Down Arrow | Move to Adjacent Track Backward |
| Right Arrow | Move One Beat Forward |
| Left Arrow | Move One Beat Backward |
| / | Solo-select Track |

| | |
|---|---|
| ? | Recall Previous Track Monitor-Mute Setting |
| * | Select All Tracks |
| \| | Flip Track Settings |
| \ | Lock Scroll Display |
| ` | Tag Events to Clipboard |
| ~ | Tag Region for Clipboard |
| ' | Transmit Default Programs |
| + - | Move to Adjacent Pattern or Link |
| [ ] | Increment/Decrement Speed Offset |
| ; | Goto Track |
| , | Move to Adjacent Track Backward |
| . | Move to Adjacent Track Forward |
| < | Move to Adjacent Track Backward |
| > | Move to Adjacent Track Forward |

---

| | |
|---|---|
| BACKSPACE | Switch Speed Offset |
| CURSOR keys | Keys Locate Beat/Edit Position |
| TAB | Switch Between Pattern and Link Modes |
| INS | Insert Events From Clipboard |
| INS | Insert Events into MIDI Data Editor |
| DEL | Delete Events in MIDI Data Editor |
| DEL | Copy to Clipboard |

---

| | |
|---|---|
| Ctrl-A | All Notes Off and Clear Controllers |
| Ctrl-B | Set Maximum Buffered Events |

---

| | |
|---|---|
| Ctrl-C | Chase Events: |
| Enable | Toggle Event Chasing On/Off |
| All | Select All Event Types |
| None | Deselect All Event Types |
| PWTMBFVSO | (Individual Type Selection) |
| maX | Set Maximum Size of Table |
| Delay | Set Global Playback Delay |
| Chase | Report (View Table) and Test (Transmit) |

---

| | |
|---|---|
| Ctrl-D | Run DOS Shell |
| Ctrl-E | Quick Erase Current Track |
| Ctrl-F | Flip Chords in Track |

---

Ctrl-G Global Edit Menu:

| | |
|---|---|
| Blend | Track to Track within Pattern Range |
| Copy | Track to Track within Pattern Range |
| Erase | Track(s) within Pattern Range |
| Filter | or Thin Events in Track(s) within Pattern Range |
| Quantize | Track(s) within Pattern Range |
| Scale | or Clip Track(s) within Pattern Range |
| eXchange | "Swap" Data in Track(s) within Pattern Range |

---

Ctrl-HOME Reset to Beat/Link 1

---

Ctrl-K Keymap; Clear/Load

Keymap File Syntax Examples:

```
Keymap a j c   :keymap affects tracks a, j, and c
C5:B3                  :play B3 instead of C5
D4:A2                  :<-semi-colons start comment
end                    :end of keymap
transpose -12 a c :play tracks a & c down 1 octave
velocity 200d  :scale vel by 200% on track d
port2port 1 2  :reroute port 1 tracks to port 2
track2port b 3 :reroute track b to port 3
chan2port 12 1     :reroute tracks assigned to channel 12
                       :to port 1
```

---

Ctrl-L Linearize Song

Ctrl-N MIDI Pitch display: Notes/Key #'s

---

Ctrl-P SMPTE/Time Code Settings:

| | | |
|---|---|---|
| Cue | | Set Cue Time |
| Offset Stripe | Stripe Tape Starting Time | |
| Frame Rate | Choose 24,25,30, or 30D | |
| Delay Time | Set Global Playback Delay | |
| Midi Clocks Output | Toggle Send Midi Clocks | |
| Midi Time | Code Output | Toggle Send Midi Time Code |

---

Ctrl-R Enable Step-Time Recording

Ctrl-S Set Swing Factor (also from "Q")

| | |
|---|---|
| Ctrl-T | Timer Mode:Elapse/Reset/Time-of-day/Zero Timer |
| Ctrl-V | Video Display Options |
| Ctrl-X | Exit Texture |
| Ctrl-\ | MPU-401 Direct Command (Hex) |
| Alt-V | Display Texture Version # |

---

Edit Box for Track, Pattern, File name, etc.:

-Use Cursor Keys for Movement

| | |
|---|---|
| <INS> | Toggle Insert Mode On/Off |
| <DEL> | Delete a Character |
| <Ctrl-U> | Undo |
| <Ctrl-K> | Kill to End-of-Line |

---

| | |
|---|---|
| [1] | Toggle Quantize Preset On/Off |
| [2] | AutoPunch Settings |
| [3] | Metronome Beeps per Beat |
| [4] | Count Off duration |
| [5] | Touch Receive Filter On/Off |
| [6] | Midi Thru Settings |
| [7] | Toggle Auto Reset controllers On/Off |
| [8] | Sync Mode |
| [9] | Advance Playback-Number of subbeats |
| [0] | Set Timebase |

---

PATTERN MODE FUNCTION KEYS:

| | |
|---|---|
| [F1] | Dimension Pattern |
| [F2] | Splice Patterns |
| [F3] | Blend Tracks |
| [F4] | Transpose Track(s) within Region |
| [F5] | Block Move Track(s) within Region |
| [F6] | Block Copy Track Region to Track |
| [F7] | Fill Track(s) within Region |
| [F8] | Scale or Clip Data in Track(s) Region |
| [F9] | Filter or Thin Events in Track(s) Region |
| [F10] | Edit Track Events |

---

LINK MODE FUNCTION KEYS:

| | |
|---|---|
| [F1] | Link and Linear Pattern Assignment |
| [F2] | Set Pattern Repeat Amount |

| | |
|---|---|
| [F3] | Mute Track(s) |
| [F4] | Transpose Track(s) |
| [F5] | Relative Tempo Settings |
| [F6] | Insert Link(s) |
| [F7] | Delete Link(s) |
| [F8] | Set Last Link Number |
| [F9] | Store Link Settings |
| [F10] | Recall Link Settings |

---

COMMAND LINE SYNTAX AND SWITCHES:

TX{R} {<songname>} {<switches>}
curly brackets = optional statements
(don't actually type brackets!)
angle brackets = non-literal description
all switches other than <songname> start with "/"

Switches:
{/<video-mode>}
"c" = force color video
"m" = force mono video
"l" = force LCD video
"q-" = quick video off switch
{/i:<interrupt #>}
use a non-default interrupt number
{/b:<base address>}
use a non-default MPU base address
{/cms{=<# UART ports>{:<UART base address>{:<# extra cycles>}}}}
CMS UART port settings

---

DOS ENVIRONMENT VARIABLES

| | |
|---|---|
| txhelp=<path> | location of txhelp.exe |
| txsound=<value> | duration of events in event view<br>range is 0 - 65000 |
| txslowtrans=<value> | slow transmission of Chase table<br>and Default Program table |

---

# APPENDIX II

# MUSIC QUEST MQX MIDI INTERFACES

## CHASE LOCK SYNC FOR THE MQX

Most of the MQX cards support this feature. Check your Music Quest documentation.

_ Choose **Chase Lock In** or **Chase Lock Out** from the Sync Options menu <**8**>. Use is identical to syncing to song position pointer as in the chapter: **Synchronization**.

## SMPTE AND MIDI TIME CODE

*Note: The overhead involved when using SMPTE or MIDI time code with a PC or XT class computer is too overwhelming for the application to perform reliable synchronization. We strongly suggest using Chase Lock Sync on these machines for the best results. If you must use time code, please consider the possibility of a faster machine.*

These models support SMPTE as of this writing:

_ MQX-16S

_ MQX-32

You will see a special version of the Sync Options menu <**8**> with most Music Quest cards. The Time Code options will only work with the cards which support SMPTE. If your card doesn't support SMPTE, a pop-up message will inform you with a **Feature Not Installed** message.

When in Time Code Out mode, MIDI playback is disabled. You will still be able to "see" the song or pattern play, but no data is sent to the MIDI out ports.

## SMPTE USE

All time code times are shown in the following format:

*(hours):(minutes):(seconds):(frames)*

For example, a time shown as **2:32:16:24** represents a time of 2 hours, 32 minutes, 16 seconds and 24 frames.

## STRIPING SMPTE USING TEXTURE

Assuming you are using SMPTE with a multi-track tape deck of some sort, the first thing that needs to be done (if it hasn't already been done) is to record a SMPTE *stripe* on one of your tape tracks. You may do this using Texture or any other device that will do SMPTE striping.

_ Use <**CTRL-P**> to access the **TIME CODE Settings** menu (also accessible from the **SYNC Options** menu <**8**>).

*Cue and Offset Stripe:*

The *Cue* and *Offset Stripe* settings have a direct impact on each other and deserve a bit of discussion before striping tape.

**Offset Stripe Time**: This represents the time value of the first frame to be written to tape. All subsequent time values will be offset by this amount.

**Cue Time**: This represents the time when your pattern or song will start to play, relative to the Offset Stripe Time.

A common practice is to set Offset to 00:59:50:00 and Cue to 01:00:00:00. If you subtract the Offset from the Cue (using normal clock math) you will see that these settings provide a ten second lead time between the start of SMPTE frame messages and the start of your pattern or song. Since your sequence starts at 01:00:00:00, subsequent time readings are relative to the start of the sequence minus 1 hour.

It is **very** important to leave some lead time between Offset and Cue, as the accuracy of sync is unpredictable with no lead time.

Music Quest recommends a minimum ten second lead. We've experienced no problems on our setup with a five second lead.

*Frame Rate:*

24, 25, 30 and 30 Drop Frame are available with the MQX-32 (30 and 30 Drop only on the MQX-16S). If you're not synching to an already established frame rate, we suggest sticking with the default: 30.

The other options from this menu will have no effect when striping.

_ Hit <**ENTER**> or <**ESC**> to leave the **TIME CODE Settings** menu.

_ Hit <**8**> to bring up the **SYNC Options** menu.

_ Choose <**6**> for **Time Code Out**.

Assuming you have already connected *Tape Out* on your MQX to an input on your multitrack tape deck, you may now adjust the level for the sync tone on your tape deck (too high a level will bleed to neighboring tracks, too low will yield dropouts - the optimum level varies from machine to machine, somewhere between -10 and 0 VU should yield reliable results). We also recommend using an "outside" track such as 1 or 8 on an 8 track machine.

The main difference between syncing to SMPTE and syncing to FSK or systems that deliver Song Position Pointer is that SMPTE doesn't know a thing about tempo. Therefore, it makes no difference what song or pattern is loaded into Texture when you stripe the tape, as long as you stripe enough of the tape to "house" your entire song or pattern. If you like, you can stripe using an empty, looped pattern. The **Now** indicator near the top of Texture's left window will indicate how much time is passing. As mentioned above:

**All MIDI output is disabled when striping SMPTE**.

*SmpteGen:*

When you or Texture stops play, Texture will continue to generate SMPTE frames with the message **SmpteGen** displayed until you issue a second stop command. This is to allow extra striping after the song has stopped - which is highly recommended.

## SMPTE PLAYBACK

Assuming a successful tape striping, all you need to do now is connect your tape deck's sync track output to the MQX *Tape In*, set Sync <**8**> to **Time Code In** <**6**> and roll the tape back and go. You should be able to use the tape machine transport to control Texture's location for playback and recording.

## TIME CODE REFERENCE

*Note: The "Now" indicator will show a minimum position of 2 frames. This is because the MQX will form its first frame message after the first 2 frame messages have been read.*

_ <**8**> brings up the Sync Options menu.

_ The **TIME CODE Settings** menu is available from the Sync Options menu or by hitting <**CTRL-P**>.

**Cue**: Texture will start playing when the cue time is reached. Avoid setting cue to 00:00:00:00 - results will be unpredictable. A minimum cue of 5 seconds is recommended.

**Offset Stripe**: Starting time of SMPTE stripe. This has no meaning when reading SMPTE, the time you set for Offset Stripe will be the first frame position written to tape when striping.

**Frame Rate**: Choose from 24, 25, 30, and 30 Drop Frame formats.

Texture will reset the frame rate automatically if it hasn't been set properly when it receives its first frame position message from the MQX. We can't, however, guarantee the reliability of the chase in this case - it's best to start again.

**Delay Time**, which is a global setting shared by SMPTE Chase, Event Chase, Default Programs, Chase Lock Sync and Song Position Pointer Chase, represents a number of seconds (0 - 10). Its usage in the various parts of the program varies. This is how it relates to Time-Code-In mode:

When the first frame position message is received, the *target* time for sync to occur is calculated, based on the setting of Delay Time. You might wish to make this time longer than the default, 0. First, let's talk about the default.

A zero setting of the global Delay Time may not mean exactly 0 in every case. In the case of Time Code sync, a one second delay is the minimum, so a setting of 0 seconds is identical to a setting of 1 second. With a setting of 1 or less, sync is scheduled to occur 1 second after the first frame position message is received. This gives Texture some time to locate and possibly chase MIDI events (if you have Chase Events enabled). Depending on the density of your MIDI data, the speed of your computer and many other factors, one second may or may not be plenty of time. In most cases, if Texture doesn't have enough time to perform the chase, sync will not occur and you will see a message posted which recommends that you increase the delay time. When in doubt, increase the delay time.

The Delay Time range is 0 to 10 seconds.

Please note that the Delay Time you access here is the same Delay Time that you may change in Chase Events or Assign Default MIDI Programs; there is no cumulative affect and changing it in one place also changes it in another. It is global and is saved to disk with your song file.

## MIDI TIME CODE

MIDI Time Code is used in the exact same way as SMPTE Time Code, except the messages are delivered and sent through the MIDI cables and you must have a device that reads and writes this format.

_ The MQX will accept SMPTE from *tape in* or Midi Time Code from *MIDI in* but not both at the same time.

_ It will deliver Midi Time Code to *MIDI out* and/or Midi clocks to *MIDI out* (these are menu choices from the <**CTRL-P**> menu).

If you're not using the **out** features, we suggest leaving them turned off.

# APPENDIX III
# YAMAHA C1

*The following information applies to the Yamaha C1 version of Texture (**TXC.EXE** or **TXCR.EXE**) only.*

> *Note: CAPI.EXE (v1.08) was included on your Texture 4 disk. Always load this version of CAPI before running TXC.EXE or TXCR.EXE.*

MIDI Input Port Two is NOT hooked up in Texture 4. In order to hook up the second IN port, we would have to degrade input performance overall. If you need the MIDI input merge, we suggest using an external MIDI merge device.

---

## MIDI METRONOME

As of this writing, this feature is present in the C1 version only - this to make up for the C1's lack of a metronome output jack. You may choose a single drum machine or synth note to replace or add to the current speaker blip that is used for a metronome. You must specify the settings in a DOS environment variable before booting Texture. You can do this from your AUTOEXEC.BAT file so that every time you boot your computer, this setting is entered for you automatically. The syntax:

```
SET TXMIDIMETRO=PxCxNxVxLx{S}
```

The x's above represent the values you will plug into this statement. The letters can be upper or lower case and can be in any order, but must be followed by the corresponding value.

_ **P** stands for **P**ort
_ **C** stands for **C**hannel
_ **N** stands for **N**ote Number
_ **V** stands for **V**elocity
_ **L** stands for **L**ow Velocity (unaccented beats)
_ **S** stands for **S**peaker On and is optional.

Example: Port 3, Channel 10, Note # 37, Velocity 120, Low Vel 45, Speaker Off:

```
SET TXMIDIMETRO=P3C10N37V120L45
```

or:

```
SET TXMIDIMETRO=P3-C10-N37-V120-L45
```

(more readable this way)

*To turn the C1's speaker on:*

```
SET TXMIDIMETRO=P3-C10-N37-V120-L45-S
```

_ The order of the switches doesn't matter, this would produce identical results:

```
SET TXMIDIMETRO=S-L45-V120-N37-C10-P3
```

To experiment, just type your statement at the DOS command line before loading Texture. When you've found a setting you like, add the statement to your AUTOEXEC.BAT file for automatic implementation every time you turn on your computer.

---

## SMPTE IMPLEMENTATION

*Note: The Yamaha C1 SMPTE hardware is VERY finicky when it comes to reading a SMPTE stripe from tape. Depending on your recording equipment and previous experience in this area, you may or may not experience problems when reading SMPTE. The C1 has no drop-out protection. It also can sometimes mis-read the stripe which can have the effect of tempo fluctuation (it is usually quite obvious when this happens....).*

*At the time of this writing, we are currently investigating reasonably priced products which claim to cure the above ills. After we have had a chance to test these devices, we may be able to recommend one or more of them to you if you are experiencing trouble.*

*At first glance, it would seem that a Time Code Refresher device is NOT going to take care of certain SMPTE problems. This would lead us to think that the answer lies in a Time Code Regenerator. Some users have found that their C1's need to be cold-booted (turned off, then on) every couple of hours for reliable SMPTE performance. It has also been confirmed that these problems are not unique to Texture but occur in a similar manner on other sequencers when used with the C1.*

---

## STRIPING SMPTE USING TEXTURE

Assuming you are using SMPTE with a multi-track tape deck of some sort, the first thing you need to do (if it hasn't already been done) is record a SMPTE "stripe" on one of your tape tracks. You may do this using Texture or any other device that will do SMPTE striping.

### TIME FORMAT (HOURS):(MINUTES):(SECONDS):(FRAMES)

Use <**CTRL-P**> to access the **TIME CODE Settings** menu (also accessible from the <**8**> **SYNC Options** menu). The **Cue** and **Offset Stripe** settings have a direct impact on each other and deserve a bit of thought before striping tape.

_ Offset Stripe Time: This represents the time value of the first frame to be written to tape. All subsequent time values will be offset by this amount.

_ Cue Time: This represents the time when your pattern or song will start to play, relative to the Offset Stripe Time.

A common practice is to set Offset to 00:59:50:00 and Cue to 01:00:00:00.

If you subtract the Offset from the Cue (using normal clock math) you will see that these settings provide a ten second lead time between the start of SMPTE frame messages and the start of your pattern or song. Since your sequence starts at 01:00:00:00, subsequent time readings are relative to the start of the sequence minus 1 hour.

*Lead Time:*

It is **very** important to leave some lead time between Offset and Cue, as the accuracy of sync is unpredictable with no lead time. We've experienced no problems on our setup with a five second lead.

_ Frame Rate: 24, 25, 30 and 30 Drop Frame are available. If you're not synching to an already established frame rate, we suggest sticking with the default of 30.

_ The other options from this menu will have no effect when striping.

_ Hit <**ENTER**> or <**ESC**> to leave the **TIME CODE Settings** menu.

_ Hit <**8**> to bring up the **SYNC Options** menu.

_ Choose <**4**> for **Time Code Out**.

*Adjusting Sync Tone:*

Assuming you have already connected **Time Code Out** on the C1 to an input on your multitrack tape deck, you may now adjust the level for the sync tone on your tape deck (too high a level will bleed to neighboring tracks, too low will yield dropouts - the optimum level varies from machine to machine, somewhere between -10 and 0 VU should yield reliable results). We also recommend using an "outside" track such as 1 or 8 on an 8 track machine.

The main difference between syncing to SMPTE and syncing to FSK or systems that deliver Song Position Pointer is that SMPTE doesn't know a thing about tempo. Therefore, it makes no difference what song or pattern is loaded into Texture when you stripe the tape, as long as you stripe enough of the tape to "house" your entire song or pattern. If you like, you can stripe using an empty pattern. The **Now** indicator near the top of Texture's left panel will indicate how much time is passing.

When you or Texture stops play, Texture will continue to generate SMPTE frames with the message **SmpteGen** displayed until you issue a second stop command. This is to allow extra striping after the song has stopped - which is highly recommended.

## TIME CODE REFERENCE

Assuming a successful tape striping, all you need to do now is connect your tape deck's sync track output to the C1's **Time Code In** set <**8**> Sync to <**3**> **Time Code In** and roll the tape back and go. You should be able to use the tape machine transport to control Texture's location for playback and recording.

<**8**> brings up the **SYNC Options** menu.

The **TIME CODE Settings** menu is available from the **SYNC Options** menu or by pressing <**CTRL-P**>.

_ **Cue**: Texture will start playing when the cue time is reached. Avoid setting cue to 00:00:00:00 - results will be unpredictable. A minimum cue of 5 seconds is recommended.

_ **Offset Stripe**: Starting time of SMPTE stripe. This has no affect when reading SMPTE, the time you set for **Offset Stripe** will be the first frame position written to tape when striping.

_ **Frame Rate**: Choose from 24, 25, 30, and 30 Drop Frame formats.

Frame Rate detection is NOT automatic using the C1 version. A special command is available through the <**CTRL-P**> **TIME CODE Settings** menu for Frame Rate detection, it is labeled **G**et **Incoming Frame Rate**. Make sure you are in **Time Code In** sync mode and then issue this command. You will be prompted as to when to roll and stop the tape, after which the correct frame rate will have been set. This little song and dance seems to be necessary to get an accurate reading from the C1.

_ **Delay Time**, which is a global setting shared by SMPTE, Event Chase, Default Programs and Song Position Pointer Chase represents a number of seconds (0 - 10). Its usage in the various parts of the program varies. This is how it relates to Time-Code-In mode:

When the first frame position message is received, the *target* time for sync to occur is calculated, based on the setting of Delay Time. You might wish to make this time longer than the default, 0.

First, let's talk about the default. A zero setting of the global Delay Time may not mean exactly 0 in every case. In the case of Time Code sync, a one second delay is the minimum, so a setting of 0 seconds is identical to a setting of 1 second. With a setting of 1 or less, sync is scheduled to occur 1 second after the first frame position message is received. This gives Texture some time to locate and possibly chase MIDI events (if you have Chase Events enabled). Depending on the density of your MIDI data, the speed of your computer and many other factors, one second may or may not be plenty of time. In some cases, if Texture doesn't have enough time to perform the chase, sync will not occur and you'll see a message posted which recommends that you increase the delay time. In other cases, Texture simply won't start to play and the "Now" indicator will continue to advance. When in doubt, increase the delay time.

*Please note that the Delay Time you access here is the same Delay Time that you may change in Chase Events or Assign Default MIDI Programs; there is no cumulative affect and changing it in one place also changes it in another. It is global and is saved to disk with your song file.*

## USING MIDI SYNC WITH THE C1

Please read the chapter entitled **Synchronization** for information regarding sync to Song Position Pointer. In addition to the issues covered there, one other point needs to be addressed with regard to the C1:

If you are syncing to an external MIDI device and wish to start at the very top of a Texture Song or Pattern, issue the <**CTRL-HOME**> command followed by <**P**> for the Play command before starting the external MIDI sync device - this will assure perfect sync.

# APPENDIX IV
# CMS UART PORTS

*This appendix details the special switch settings required to make use of extra output ports manufactured by **C**omputer **M**usic **S**upply. Please also check the **readme** file in your Texture directory for any extra information which pertains to these cards.*

*First, we will examine the differences between the different CMS models with regard to their use with Texture. This is followed by a discussion of how to inform Texture of the configuration you are using. Be sure to take a close look at the examples in this section.*

---

## CMS 401

This is an MPU-401 clone only, and therefore does not require any special documentation.

---

## CMS 101/102/104/404 (SERIES 1)

These cards have between one and four UART ports which Texture can address as output ports. The MIDI input on these cards is not enabled when working in Texture. From within Texture, these ports start at port number two (unless used with an MQX-32). In other words, a CMS 404 with 4 ports will show up as Texture ports 2, 3, 4 and 5.

_ IRQ: The interrupt (IRQ) of this card is not enabled when using Texture. If you don't have any other software that uses it, you may disable the IRQ on the card. Please consult your CMS manual as to the proper way to do this.

_ Address: The UART port base address (referred to as *Status and Command Port* in the CMS documentation) is adjustable on the card and through a command line switch in Texture. You must have the **same** address specified on the card and in Texture. The specific jumper settings vary from card to card, so you must consult your CMS documentation for the proper settings. The Series 1 cards are set to the

default of 338H (the *H* stands for *hexadecimal*). This address is sometimes in conflict with the MPU 401 and its clones. If you don't specify an address, Texture will assume the address is 358H. If your card is set to any other address, specify that address as part of the Texture command line switch (see below).

*Note: At least one version of the CMS documentation for the 404/101 (V2) cards contains a misprint of the proper jumper settings for address 358H. If the document shows only jumper 11 as being set to ON, this is incorrect. Set jumpers 9 and 11 to ON for address 358H on the 404/101 (V2) cards.*

---

**CMS 401-II, 444 (Series 4)**

These cards have both the MPU 401 clone and one or more UART ports combined into one card. Texture "sees" the UART port(s) on these cards in an identical manner to the UART ports of the Series 1 cards. This means that you must specify the base address of the first UART port in the CMS command line switch.

Assuming you are using the default MPU 401 address of 330H, you would specify the address of 332H in the Texture command line switch for the first UART port (which would be the address of the second port on the card).

As with the Series 1 cards, Texture doesn't support any extra MIDI inputs or require any special IRQ setting for the UART ports. If you are using a different intelligent port address, simply add 2 (in hex) to determine the proper UART address.

*Note: Early 444's used a Roland Chip that is NOT compatible with the other cards or with Texture's implementation. If your unit will not respond to any ports except port one, you should take a look at the card and see if there is a Roland Chip present. If so, please contact CMS for update information.*

Texture will respond to the FSK location feature built into the 444 but not the SMPTE feature. SMPTE implementation is currently available only with the Music Quest family of interfaces and the Yamaha C1 computer.

*Turbo XT Use:*

There is an incompatibility problem when using the CMS UART ports which seems to be unique to turbo'd XT class machines. The symptoms range from disappearing midi data that was being sent to one or more of the UART ports, or (ouch!) system crash. To get around this, you may add a *cycle* factor to the CMS command line switch, designating a number of extra computer cycles to delay after each port access. Our tests were done on an XT running at 10Mhz, and we found the range of 10 - 30 to be acceptable. The lower the number, the better the overall performance. Higher numbers may prove to be more reliable - a bit of trial and error is the only way to tell as this will vary from system to system.

## COMMAND LINE SWITCH SYNTAX

To enable **any** CMS UART ports, a special command line switch is used. You will invoke Texture using this switch. It may be combined with any other Texture switches (see **Command Line Switches**). At least one argument must be present, defining the number of UART ports present:

TX /CMS=<number of UART ports>:<UART base address>:<cycles>

or:

TXR /CMS=<number of UART ports>:<UART base address>:<cycles>

*Some Examples:*

_ When using a CMS 444 with one smart and three UART ports:

```
tx /cms=3:332
```

In the above example, the command tells Texture that your CMS card has 3 UART ports with the first UART port's address at 332.

_ When using a CMS 404 with 4 UART ports with an address of 358:

```
tx /cms=4
```

Since the address is set to the Texture default, the second argument isn't required.

_ A third argument specifies the number of extra cycles (see the above explanation on **Turbo XT Use**). Adding the a 10 cycle wait to the above example:

```
tx /cms=4:358:10
```

Note that the second argument **is** required when the third argument is also being used.

You may use the UART ports with a Music Quest MQX 32. Once in Texture, The UART port numbers will in this case start at port number 3 instead of 2.

Jump: See: add reference to Delay Time
Chord flip:see eXchange
Types of Key Commands refer to Help
Edit Box: see Line Editor
Message box:
Line Editor: see Name, Load, Save
Edit text lines: see Line Editor
Typing Text: see Line Editor, Name
Add: see Insert, Edit, clipboard
Insert Notes: see Clipboard, Edit <F10>, Insert <INS> Edit Mode
Add Notes: see Insert <INS> Edit Mode, Clipboard
Key numbers see note display
Midi Note key numbers See: Note display
insert:Clipboard,edit,line editor,link,blend,block copy
move: see goto, Track Map selection keys, jump, etc
Reset Current Start Beat See: Play, Goto, Jump
Restart: see Play
Directory: See File, Path
Path: see File, File:Files
Time Field see Midi Data Display, Edit
Data Field see Midi Data Display, Edit
Midi Channel Field see Midi Data Display, Edit
Channel see Midi Data Display, Edit, Assign, Global Edit, etc
Status Code Field see Midi Data Display, Midi Status Codes, Edit
Midi Files see Standard Midi Files
Like Notes see Edit
Enhanced Midi Thru see MIDI Thru
Standard MIDI thru see MIDI Thru
International MIDI Assoc see MIDI Status Codes
Continuous Controller see MIDI Status Codes
Last Tick see Edit
Song Position Pointer see Sync
Quick Video see Video
Color see Video
Mono see Video
Note-On see MIDI Data Display
All Notes Off see Panic Button
CTRL-A thru X see appropriate entries (Assign, Exit)
Pitch Wheel see MIDI Status Codes

Program pgm see MIDI Status Codes
After Touch see MIDI Status Codes
Song Position Pointer see Sync to song Position Pointer
Stop see <SPACE>
Continue see <SPACE>
Time Code see Sych 8
Stopwatch see Timer Mode ctrl T
Time of day see Timer  Mode
Copy
Cut and Paste
Single note entry see step mode, edit ins
add notes see edit ins
accelerando see Scale, Rel Tempo
ritard see Scale, Rel Tempo
Crescendo, decrescendo see Scale
repeat see Loop, F2 Repeat, splice,fill
Pattern list see Outline
Link list see Outline
Song list see File Files
Remove: see zap, erase
Remove Track names: see zap
Remove clipboard buffer: see zap
redo: see undo
move: see goto, view locate function TAB
clear song memory: see File New
toggle: see Tab, 1 Quantize, Intro,Touch Rcv, etc.
change tempo: see Tempo, Rel Tempo, Speed offset,
smart FSK see:

---

**INDEX TEXTURE 4 MANUAL:**

*.*  7:11
*.SNG  7:10
.SNG  3:4, 7:7
<1 INT>  10:3
<CTRL-D>  6:34
<CTRL-K>  6:33, 6:37
<CTRL-L>  8:62
<ALT-V>  4:20
<CTRL-X>  6:34
<F1> Pattern  9:2

Linear 9:11
<F10> Recall 9:3
<F2> Repeat 9:2
<F3> Mute 9:2
<F4> Transpose 9:2
<F5> Rel Tempo 9:2
<F6> Insert 9:2
<F7> Delete 9:2
<F8> Last 9:3
<F9> Store 9:3
<TAB> 4:5, 9:1, 9:12
3 Metro 6:8
Abandon
Exit Texture 3:10, 7:10
Accelerando 8:47, 8:50
Add Extra Links 9:8
Add Text 4:19
Address Conflict 1:3
Advance 10:9
FSK Sych 10:9
After Touch
Chase Events 6:29
Clip 8:55
Data Display 4:12, 4:15
Filter 8:42
Save 6:20
Scale 8:54
Thin 8:43
All
Track Select 6:12
All Notes Off 6:17, 6:19
Angle Bracket Keys 4:5
Apostrophe Key 5:4
Arpeggiate
Quantize 8:29
Assign 5:1
Channel 5:2
Default MIDI Program 5:5, 6:32
Default Programs Delay 6:30
Delay Time 5:5
Linear Pattern 9:4
Pattern 3:9
Patterns To Links 9:3, 9:4, 9:5

Port 5:4
Transmit All 5:6
Audio Input
Sync 10:7
AUTOEXEC.BAT 1:7, 7:18, 7:21
AutoPunch 6:16
Available RAM 5:11
Back Pattern
Splice 8:8
Backup Disk 1:4
Base Address 1:3
Change 1:3
Batch Files 7:20
Install 7:20
Beat 2:2, 3:4
Locate & View 6:3
Notation Display 4:13
Linear Pattern 9:10
Beats Per Minute 6:6
Tempo 6:7
Beeps Per Beat 6:8
Blend 8:9
Channel 5:2, 8:9
Clipboard 8:37
Global Edit 8:58
Block Copy 8:11
Block Move 8:12
Delay Effects 8:13
Boot Texture 1:7
Boundaries
Pattern 3:5
BRAND3 9:5
Breath Controller
Chase Events 6:29
Buffer 6:1, 6:21, 8:22
Clear 6:22
Filter After-touch 6:22
Loop 6:11
Quantize Track Options 6:22
Record 6:2
Re-size 5:11
Saving Loops 6:21
Step Record 6:25

Touch Receive 6:19
Buffer Size 5:11, 5:14
Byte
Display 8:4
Remove 8:4
Bytes 8:4
CET 6:27
Delay Time 6:31
CGA
Video Display Options 4:2
Change Directory
Path 7:5
Change Drive 7:9
Change Interrupt 1:2
Change Midi Data 8:36
Change Octaves
Transpose 9:6
Change Tempo 6:5, 9:5, 9:7
Change Tempo Within Song 9:7
Channel 1:4, 2:2
Assign 3:8, 5:2
Assign MIDI Thru 5:7
Blend 8:9
Display 4:16, 8:31
Filter 8:41
Global Edit 8:60
Same Notes 5:14
Channel Mode Messages 4:15
Channel Pressure
Filter 6:19
Channel Voice Messages 4:12
Chase Events 6:27
Delay Time 6:31
Enable 6:29
Programs 6:29
Report and Test 6:30
Chase Events Table 6:27
Delay 6:28, 10:6
Size 6:29
View 6:30
Chord Flip 8:57
Chord Inversions 8:57
Chords

Quantize 8:23
Clear
Data 5:12
Keymap 6:38
Clear Data 7:4
Clip 8:45
After Touch 8:55
Global Edit 8:58
Pitch Wheel 8:55
Velocity 8:56
Clipboard
Tag Events 8:38
Zap 5:13, 8:39
Clip Menu 8:55
Clock Display 6:20
Clock Ticks
Sync 10:1
CMS Interrupt Switches 7:20
Color Graphics Adaptor 4:2
Command
Display 4:2
Undo 3:6, 8:5
Command Line Switch 7:19
Change Address 1:3
Changing IRQ 1:2
Video Display 1:7
Command.com 7:16
Compress
With Tolerance 8:26
Computer
286,386,486 1:2
Monitor Display 4:1
Setup Requirements 1:1
Conductor Track
Standard MIDI Files 7:13
Continue 6:4
Continuous Controller
Breath 4:15
Chase Events 6:27
Data Display 4:12, 4:14
eXchange 8:44
Filter 8:42
Foot 4:15

Modulation 4:15
Portamento 4:15
Reset 6:17, 6:19
Scale 8:54
Stereo Pan 4:15
Sustain Pedal 4:15
Thin 8:39, 8:43
Volume 4:15
Contract Data
Scale 8:45
Controller Keyboard
MIDI Thru 3:7
Copy 8:1, 8:10
Block Copy 8:11
Clipboard 8:37
Global 8:1
Global Edit 8:58
Count 6:6
Default Setting 3:3
Intro 6:9
With Advance 10:10
Count Off 6:9
Crash 1:2
Crescendo
Scale 8:51, 8:54
Cursor Keys 8:36
Data Fields
MIDI Data Display 4:13
Data Transmission
Dos Environment Variables 7:18
Synth Error 7:18
Decellerando 8:47
Decrease Tempo 6:5
Decrescendo
Scale 8:54
Default Drive 7:9
Default End Beat 5:10
Default MIDI Program (DMP) Table 5:4, 7:18
Clear 5:5
Play 5:4
Record 5:4
Send 5:5
Table 5:4

Transmit 5:6
Delay 5:5, 6:31
Assign 6:30
Chase Events 6:30
Chase Events Table 6:28
Playback 6:18
Set Delay Time 6:31
Song Position Pointer 10:6
Delay Effects
Block Move 8:13
Delay Time 5:5, 6:31
<CTRL-C> 6:31
<CTRL-P> 6:31
Assign 6:31
Chase Events 6:31
Default MIDI Pgms 6:31
Delete
Clipboard 8:38
Event Type 8:36
Link 9:5
Notes 8:36
Dimension 3:5
Linear Pattern 9:11, 9:12
Pattern 5:8, 5:10
Scale Tempo 8:48
Directory
Current Files 7:11
Directory Path 7:4
Diskcopy 1:4
Disk Drive 7:9
Display
Links 9:9
Outline 4:10
Video Options 4:1
Divisor
Quantize 8:16
DMP Table 5:4, 7:18
DOS
Dos Command Shell 7:16
Dos Commands
Execution 7:16
Dos Directory Display 7:9
Dos Environment Variables 7:17

TxHelp 7:17
Txslowtrans 7:18
Txsound 7:17 8:35
DOS File Commands 7:3
DOS Filespec 7:10
DOS Set Commands 7:21
DOS Wildcard 7:10
DOS 5
Running Texture 1:8
Setup Requirements 1:1
Drive 7:3, 7:9
Change 7:5
Default 7:9
Saving To/From 7:7
Setup Requirements 1:1
Drum Machines
Swap 6:34
Duration
Same Notes 5:14
Scale 8:50
Step Mode 6:23
Durations
Allign 8:23
Equal 8:23
Legato 8:23
Quantize 8:22
Unaffected 8:23
Durations Only
Quantize 8:29
Dynamic Velocity 8:52
ECT 7:18
Edit 8:31, 8:33
Cursor Keys 8:36
Escape 8:36
Fast 8:33
Global 8:58
Insert 8:35
Locate 8:34
Match 8:34
MIDI Data Display 4:12
New Value 8:36
Note Sound Duration 8:34
Pattern 8:31

Channel/Port 8:60
Program Change Send 8:34
Quantize 8:19
Quantize Preset 8:21
Repeat Last Function 8:36
Save 8:36
Sort 8:34
Sound 4:12, 8:34
Subgroup 6:13
Text 4:19
Track 8:31
Undo 8:6, 8:35
View Data 4:12
End
Keymap 6:35
Linear Pattern 9:10, 9:11
End Beat
Default Setup 3:5
Pattern 2:7, 5:10
ENDLIN 7:20
Enhanced MIDI Thru 5:7
Channel Assign 5:3
EQ
Sync 10:7
Equal Note Durations 8:23
Erase 6:15
Global Edit 8:4, 8:58
Note-on/off 8:3
Pattern 7:3
Quick 8:4
Region 8:3
Song 7:3
Tracks 8:3
Escape 4:3
Edit 8:36
Event
Substitute 8:43
Event Buffer 6:21
Re-size 5:12
Event Buffer Full 5:12
Event Chase 6:27
Event Chase Table 7:18, 10:6
Event List

Capacity 5:14
View 4:11
Event Type 8:31
Delete 8:36
Filter 8:42
EXchange 8:43
conTroller 8:44
Global Edit 8:44, 8:58
Note 8:43
Exit Texture 3:10, 7:1
Abandon 7:1
ESC 7:1
Save 7:1
Within Command 4:3
Expand Data 8:45
Extend Pattern 8:2
Extend Pattern? 8:48
Extending Data 8:10
Extensions
Standard MIDI Files 7:13
External 6:34, 7:8, 7:15, 7:17
External Program 7:9, 7:15
External Sync
Delay Time 6:33
Field
Event Type 8:31
MIDI Data Display 4:13
Notes 8:31
Size 8:4
Time 8:31
File 7:2
Access 7:3
AUTOEXEC.BAT 7:18
Drive 7:3, 7:9
Extension
Save 3:4
eXternal 7:8
Files 7:9
Load 7:4
MIDI Files 7:4
Name 4:18
New 7:4, 8:6
Path 7:5

Quick Save 7:6, 7:14
Save 7:6
File Browser 7:3, 7:9
File Exists, Overwrite? 7:6
Filename
Legal 7:7
Length 7:8
Files Directory 7:9
Filespec 7:10
Fill 8:10
Filter 8:39
Channel 8:39, 8:41
Channel Pressure 6:19
Event Type 8:42
Global Edit 8:40, 8:58
Note Range 8:42
Status 8:42
Thin 8:43
Touch Receive 6:19
Floppy Drive 7:9
Foot Controller
Chase Events 6:29
Freeze 1:2
Front Pattern
Splice 8:8
Frozen Notes 6:19
FSK Sync 10:2
Advance 10:9
Reading Stripe 10:8
Recording Stripe 10:8
Regular 10:7
Setting Tones 10:7
Smart 10:2, 10:4, 10:5
Supported Hardware 10:3
Function Keys
Step Mode 6:23
Glissando 6:26
Global
Quantize 8:29
Global Copy 8:1
Global Delay Time 6:30
Sync 10:6
Global Edit 8:58

Channel/Port 8:60
Global Edit Menu 8:59
Goto 4:3
Beat 4:4
Link 4:4, 9:3
Link Mode 3:9, 9:1, 9:12
Pattern 3:9
Pattern Mode 3:9, 9:1, 9:12
Track 3:8
Graduated Changes To Data
Scale 8:45
Hanging Notes 6:17, 6:19
Hardware Setup 1:1
Help 3:7, 4:2, 7:17
Humanize
Quantize 8:28
With Tolerance 8:26
Inactive Patterns
Name 4:7
Increase Tempo 6:5
Initialize Track 8:4
Insert
After Touch 8:35
Continuous Controller 8:35
Link 9:5, 9:8
Notes 8:35
Outline 4:10
Pitch Wheel 8:35
Polyphonic Key Pressure 8:35
Program Change 8:35
Step Record 6:25
Text 4:19
Insert Mode 4:19
Install 1:2
Batch Files 7:20
Overlay Version 1:7
RAM Version 1:7
Texture 1:1, 1:5, 3:2
Single Floppy System 1:6
Two Floppy System 1:5
Yamaha C1 1:6
Instrument Setup 1:3
Interface

Installation 1:2
Internal Event List 5:14
Interrupt (IRQ) 3:2
Changing 1:2
Default 1:2
Settings 1:2
Intro 6:9
Invert
Mute Setting 6:13
Join Patterns 8:8
Jump 6:18, 6:28
Delay Time 6:33
Keyboard
Local Off 1:4
Multi-Mode 1:4
Omni Off 1:3
Poly On 1:4
Setup 1:3, 1:4, 3:1
Keymap
Chan2Port 6:36
Clear 6:38
Load 6:33, 6:37
Load With Song 6:38
Port Functions 6:36
Port2Port 6:36
Track2Port 6:36
Transpose 6:35
Velocity 6:35
Keymap File 6:33
Last 9:6
Last Link 3:9, 9:4, 9:5
LCD
Video Display Options 4:2
Least Significant Byte 4:16
Leave Texture 7:1
Left Single Quote Key 8:38
Left Window 2:6
Legato 8:23
With Tolerance 8:26
Librarians 7:15
Like Notes 5:14
Line Editor 4:18
Linearize Song 8:62

Linear Pattern 2:2, 9:9
Beat 9:10
Dimension 9:11
End 9:10
Mute 9:11
Number 9:10
Off 9:12
Record 6:2, 9:11
Link 2:2
Copy 8:1
Delete 9:5
Display 4:10, 9:9
Insert 9:5, 9:8
Last Link of Song 3:9, 9:4
Last Link to New Number 9:6
Loop 6:10
Monitor 9:4
Move To (Goto) 4:3
Mute 9:4, 9:6
Outline 9:9
Pattern 4:4
Pattern Assign 9:5
Rel Tempo 9:5
Repeat 9:4, 9:6
Set Last 3:9
Solo 9:4
Song 3:8
Store 9:5
Track 4:5
Transpose 9:4, 9:6
Window 9:10
Link Mode
Last 9:5, 9:6
Linearize Song 8:62
Loop 6:11
Recall 9:5
Relative Tempo 9:5
Tracks 9:9
Liquid Crystal Displays 4:2
Load 7:4
Command Line Argument 4:6
Demo Version 3:2
External Program 7:15

Files 7:11
Keymap 6:33, 6:37
Overlay Version 1:7
Pattern 7:4, 7:9
RAM Version 1:7
Setup and Track Assignments 7:4
Song 7:4, 7:9
Song With Keymap 6:38
Standard MIDI Files 7:4, 7:13
Yamaha C1 Version 3:2
LOADHIGH
Running Texture 1:8
Local Off 1:4
Locate
Beat 8:34
Note-On/Off 8:34
Loop 3:5, 6:10
Buffer 6:21
Linear Pattern 9:12
Link 6:10
Pattern 6:10
Recall Previous 6:11
Record 6:2
Record Buffer 6:10, 6:11
Start Beat 6:11
Master Tempo 3:7, 6:7
Match 8:34
Max Table Entries 6:29
Maximum Buffer Size 6:22
Memory Indicator
RAM 5:14
Merge 8:9
Message Box
Edit 4:19
Metronome 3:2, 6:8
Default Setting 3:3
Hardware 6:8
Intro 6:9
Out 6:8
Microsoft Windows
Running Texture 1:8
MIDI Clocks 10:3
MIDI Data

Delete 8:36
Filter 8:39, 8:42
Insert 8:35
Thin 8:43
MIDI Data Display 2:6, 4:12, 6:3, 8:31
Channel Field 4:16
Move 8:36
Note Velocity 4:14
Repeat Last Function 8:36
Sound 4:12
Type Field 4:16
View 4:11
MIDI
Event Editor 8:31
Event List 5:14
Event Type 6:29, 8:36
Equipment
Setup Requirements 1:1
Files
.MID 7:13
Filters 1:3
MIDI In 3:7, 10:4
Port 5:6
Input 3:1
Patch Bays 1:3
Routing 1:3
Sync 10:2
MIDI Thru 3:7, 5:6
Enhanced 5:7
Off 1:4, 5:6
Standard 5:6
MIDI Thru Box 1:3, 3:7
MIDI Volume
Scale 8:54
Note Range 8:6
Out 3:1, 3:7, 10:4
Port 5:6
Setup 3:1
Song Position Pointer 10:2
Start Command
Sync 10:3
Modulation
Chase Events 6:29

Scale 8:54
Mod Wheel Reset 6:19
Monitor
Monitor/Mute Display 2:6
Linear Pattern 9:12
Link 9:4
Subgroup 6:13
Track Display 4:8
Monochrome Monitor 4:2
Most Significant Byte 4:16
Move
Block Move 8:12
Link/Pattern Modes 3:9, 4:6, 9:12
To Beat 4:3, 4:4
To Pattern 3:9, 4:3, 4:5
To Track 4:5
Track 3:8, 4:9, 4:18
MPU-401 1:1
Interrupt Switches 7:19
Sync 10:3
MPU-IPC 1:1
Multi-Mode 1:4, 3:8
Multi-Mode Off 3:2
Multi-Track Display 2:5, 4:8
Byte 8:4
Bytes 8:4
Modulation
Monitor 6:11
Mute 6:11
Linear Pattern 9:11, 9:12
Link 9:6
Link Mode 9:4
Subgroup 6:13
Mute Setting
Display 4:8
Invert 6:13
Recall 6:12
Name 3:9, 4:6, 4:18
Track 3:5
Names
Typing 4:18
New 7:4, 8:6
New Drive 7:3

New Value 8:36
Noise Reduction
  Sync 10:7
No such file or directory Retry? 7:15
Note
  Assignments
    Keymap 6:33
    Channel 5:14
  Display
    Beats 8:31
    Key Numbers 4:16
    Note Names 4:16
    Note-On/Off 4:14
    Value 8:31
    Velocity 4:14
  Duration
    Midi Data Display 8:34
    Scale 8:50
    Insert 8:35
  Note Off
    Quantize 8:23
    Velocity 4:14
  Note-On
    Filter 8:42
  Note-On/Off Display 4:12
  Range
    Filter 8:42
    Velocity Scaling 8:52
  Values
    Identical 8:37
Nth event 8:43
Number Key Commands 2:6
Octave Transposition 8:7
Offset
  Rel Tempo 9:7
Offset Time Values Beyond Region? 8:49
Old Velocity
  Scale 8:52
Omni Off/Poly Mode 1:3, 3:2
Ostinatos 8:10
Out of Memory 5:12
Outline 4:10
Output Ports 5:7

Overdub 3:8, 6:2, 6:15, 9:11
Overdubbing
    Sync 10:9
Overlapping Notes 5:14
Overflow! 6:31
Overlapping Notes 8:37
Overlay Version 1:6
Overwrite Text 4:19
Panic Button 6:17, 6:19
Patch Change
    Chase 6:29
    Display 4:12
    Enable/Disable 8:34
Path 7:5
    Installing 1:7
Pattern 2:3
    Active 4:10, 7:8
    Affect A Range Of 8:58
    Assign 3:9
    Assign to Link 9:5
    Boundaries 3:5
    Change 3:9
    Clipboard 8:37
    Copy 8:1
    Dimension 3:5, 5:8
        Scale 8:48
    Display 4:10
    End Beat 2:7, 5:8, 5:10
        Default Setup 3:5
    Edit 8:31
    Erase 7:3
    Extend 8:2
    Global Edit 8:58
    Goto 3:9
  File Extension 7:7, 7:8
    Inactive 5:10
    Length
        Scale 8:48
    Linearize Song 8:62
    Load 4:18, 7:4, 7:9
    Loop 6:10
  Mode
      Blend 8:9

Linearize Song 8:62
Move To (Goto) 4:3
Name 4:6, 4:18
Outline 4:10
Pattern Range 8:58
Global Edit 8:59
Quantize 8:29
Zap 5:12
Save 4:18, 7:7
Setup Default 3:3
Splice 8:8
Standard MIDI File 7:12
System Crash 1:2
Tempo 6:7
Truncate 8:2
Undo 3:6, 8:6
Pattern/Link Mode Toggle 4:5
PbkReady 6:18
Pilot Tone 10:8
Pitch Bend
Stuck 6:17
Pitch Shift 8:6
Pitch Wheel
Chase Events 6:29
Clip 8:55
Data Display 4:12, 4:16
Filter 8:42
Reset 6:19
Scale 8:53
Thin 8:43
PTN 7:7
Playback 3:36:3
Change Start Time 10:9
Change Tempo 3:7
Chase Events 6:27
Continue 6:4
Count Off 3:3, 6:6
Delay 6:18, 10:10
Delay Time 6:30, 6:31
Default MIDI Programs 5:4
Early or Late 10:9
Jump (Instant) 6:18, 6:28
Keymap File 6:34

Keymap Functions 6:38
Linear Pattern 9:11, 9:12
Link Mode 9:3
Loop 6:10
Metro 3:3
Mute
Track 6:11
Punch-In/Out 6:15
Repeat Pattern (Loop) 6:10
Restart 6:4
Set New Start Beat 4:3
Stop 6:4
Transpose 8:7
Updating MIDI Events 6:27
Pocket
Quantize 8:24
Poly Mode On 1:4
Polyphonic Key Pressure
Clip 8:55
Display 4:12, 4:14
Filter 8:42
Scale 8:54
Port 2:3
Assign 3:8, 5:4
Global Edit 8:60
Keymap 6:33
Output 5:7
Power Editing 8:33
Preset
Quantize 8:19
Program Change
Chase 6:27, 6:29
Display 4:12
Enable/Disable 8:34
Filter 8:42
Insert 8:35
Transmit 8:34
Program Change Send 8:34
Display 4:15
Punch In/Out 6:1, 6:15, 9:11
Quantization
Normal 8:16
Quantize 8:14

Arpeggiate 8:29
Buffer 6:22
Chords 8:23
Compress 8:26
Divisor 2:8, 8:16
Durations 8:22
Legato 8:23
Unaffected 8:23
Durations Only 8:29
Edit 8:19, 8:22
Global 8:29
Global Edit 8:58
Humanize 8:26, 8:28
Normal 8:18
Off 8:19
Preset 8:19, 8:20
Region 8:16, 8:21
Shift 8:27
Swing 8:27
Targets 8:16
Tolerance 8:24
Tolerance Uses 8:26
Track 8:20
Type 8:28
Undo 8:22, 8:30
With Options 8:21
Quick Erase 8:4
Byte Display 8:4
Quick Save 3:4, 7:6, 7:14
Quick Video 4:1
RAM
Available 5:14
Setup Requirements 1:1
Version 1:6
Rate of Graduation
Rel Tempo 9:7
Reading Sync 10:8
Range
Note 4:14
README File 1:5
Supported Hardware 10:2
Recall
Loops 6:11

Link Mode 9:5
Mute Setting 6:12
Subgroup 6:14
Record 6:1
AutoPunch 6:16
Buffer
Quantize 8:22
Chase Events 6:27
Count Off 3:3, 6:6
Default MIDI Programs 5:4
Linear Pattern 9:9
Linear Pattern 6:2
Link Mode
Linear Pattern 9:11
Loop 6:2, 6:10
Metro 3:3
MIDI Sync 10:4
Mute
Track 6:11
Punch-In/Out 6:1, 6:15
Quantize On 8:16, 8:22
Set New Start Beat 4:3
Song 6:2
Step 6:23
Stop 6:1, 6:4
Stripe (FSK) 10:8
System Crash 1:2
Tape Sync 10:9
Track 9:9
Record Buffer 2:6, 6:10, 6:22
Loop 6:11
Record Clock 6:23
Record Status Window 6:2
Redo 3:6, 8:5
Re-Dimension a Pattern 5:9
Region
Erase 8:3
Quantize Track 8:21
Transpose 8:7
Release Velocity 4:14
Rel Tempo (Relative Tempo)
Linearize Song 8:62
Link Mode 9:5

Offset 9:7
Rate of Graduation 9:7
Standard MIDI Files 7:12
Start Beat 9:7
Remove Data 8:39
Rename
Track/Pattern 4:20
Texture 1:8
Repeat Last Function 8:36
Repeat
Link 9:4, 9:6
Loop 6:10
Reset
Controller 6:17, 6:19
Restore Text 4:20
Return to DOS 7:1
Reverse Command 8:5
Rhythm Correction 8:14
Right Window 2:5, 7:9
Roland
MPU-401 1:1
MPU-IPC 1:1
Rolled Chords
Step Record 6:26
Root Directory 7:21
Routing
MIDI 3:7
RRecord 6:1
Running Status 4:14
Same Notes
Same Channel 5:14
Save 3:4, 3:10, 7:6
After Touch 6:20
Edit 8:36
Link 7:8
Pattern 7:7
Quick 7:14
Song 2:2
Standard MIDI File 7:12
Standard MIDI Files 7:4
Subgroup 6:13
To/From Drive 7:7
Saving Memory 9:4

Scale
After Touch 8:54
Begin & End 8:46
Clip 8:55
Continous Controller 8:54
Creating Ramps 8:46
Data 8:45
Duration 8:50
Event Times 8:48
Factor 8:46
Factors Range 8:47
Global Edit 8:45, 8:58
MIDI Volume 8:54
Modulation 8:54
Old Velocity 8:52
Pitch Wheel 8:53
Polyphonic Key Pressure 8:54
Tempo 8:47, 8:50
Pattern Length 8:48
Velocity 8:51
Dynamic 8:52
Keymap 6:33
Normal 8:51
Screen Display 2:5
Scrolling Track Data Display 4:9
Search
Files 7:9, 7:11
Select
Track 4:5, 4:9, 4:18
Semi-colon key 4:5
Send On Play/Rec
Delay Time 6:33
Sequencer 3:1
Setup 1:1
Commands 7:19
Keyboard 1:1, 3:1
Setup Requirements 1:1
Computer 1:1
DOS 1:1
Drive 1:1
MIDI Equipment 1:1
Setup and Track Assignments? 7:4
Shift (See Advance)

Quantize 8:27
Shorten
Pattern 5:8
Single Floppy 1:6
Smart FSK 10:2, 10:4, 10:5
SMF 7:12
SMPTE/Time Code 10:4
Delay Time 6:31
Sync 10:2
Solo
Linear Pattern 9:12
Link 9:4
Track 4:8, 6:12
Song
Arrangements
Assign 9:3
Recall 9:5
Store 9:5
Change Tempo Within 9:7
Erase 7:3
File 7:8
Extension 7:7
Insert Links 9:8
Last Link 9:6
Link 3:8, 9:3
Load 4:18, 7:4, 7:9
New 8:6
Save 3:4, 4:18, 7:6
Set Up 7:4
Standard MIDI File 7:12
Tempo 6:7
Song Position Pointer 10:4, 10:5
Sort
Event Times 8:34
Sound 4:12
Dos Environment Variables 7:17
Edit 8:34
Sound Module
MIDI Thru 3:7
Multi-Mode 3:8
Setup 1:4
Speed Offset 6:5
Tempo 6:7

Splice 8:8
SSP 10:6
Standard MIDI Files 7:4, 7:12
    0 Format 7:12
    1 Format 7:12
    Format 1 7:13
    Linear Pattern 8:63
    Linearize Song 8:63
    Load 7:4, 7:13
    Naming 7:13
    Save 7:4
    Timebase 7:14
Standard MIDI Thru 5:6
Start Beat
    Loop 6:11
    Rel Tempo 9:7
    Reset 6:1, 6:4
    Set New 4:3, 4:5, 6:3
Start Time
    Early or Late 10:9
Start Up Song 7:4
Status
    Filter 8:42
Status Code
    Display 4:16
Step Mode (See Step Record)
Step Record 6:23
    Duration 6:23
    Function Keys 6:23
    Note Buffer 6:25
    Stop 6:25
    Tied Notes 6:26
Stop 3:3, 6:1
    Playback 6:4
    Record 6:4
Stopwatch 6:20
Store
    Link Mode 9:5
Striping
    Tape 10:5 10:7
Stuck Notes 6:17, 6:19
Subbeats 2:2, 2:7
    Advance 10:9

Sub-Directory 7:5
Subgroup 6:13
Recall 6:14
Save 6:13
Substitute Event 8:43
Sustain Pedal
Chase Events 6:29
Reset 6:19
Swing 8:27
Synchronization (Sync) 10:1
Advance Playback 10:10
Clock Ticks 10:1
Continue Command 10:4
Delay 6:30, 10:6
Drive 10:1
External Device 10:4
FSK 10:2, 10:7
Internal 10:3
Locate 10:5
Locate Time 10:6
Master 10:1
MIDI Sync 10:2
Rel Tempo 10:3
Speed 10:3
Tempo 10:3
MIDI Start 10:4
MIDI Start Command 10:3
MPU 401 10:3
Noise Reduction 10:7
Overdubbing 10:9
Pilot Tone 10:8
Reading 10:6
Reading Tape 10:8
Slave 10:1
Smart FSK 10:2, 10:4, 10:5
SMPTE 10:4
Start Command 10:5
Striping 10:5
Tape 10:7
Tape Levels 10:7
Synthesizer Response Time 6:33
TAB 2:5
Tag Events

Clipboard 8:38
Tape Levels
Sync 10:7
Tape Out
Pilot Tone 10:8
Sync 10:7
Tape Recorder
Sync 10:7
Tape Sync 10:7
Supported Hardware 10:3
Target Pattern 8:62
Tempo 2:6, 6:7
Change 6:5
Playback 3:7
Fluctuations 1:2
Hiccups 1:2
Link 9:4
Offset 6:5, 6:7
Ramp 9:7
Relative 9:5
Scale 8:47
Range
MPU 401 6:8
Variation
Hardware 6:8
Text
Add 4:19
Insert 4:19
Overwrite 4:19
Restore 4:20
Text Editor 7:20
Text Files 7:20
Creation 6:37
Keymap 6:34
Thin 8:39, 8:43
After Touch 6:20
Global Edit 8:40, 8:58
Thin by Time 8:43
Thin by Value 8:43
Tilde Key 8:39
Timebase 2:8
Quantize Divisor 8:16
Range 6:7

Standard MIDI Files 7:14
Tempo 6:7
Time Base Units 2:7
Time Field
MIDI Data Display 4:13
Time Slot
Step Record 6:24
Time-Of-Day 6:21
Timer Mode 6:20
Elapse Mode 6:20
Reset Mode 6:21
Start 6:20
Time-Of-Day 6:21
Tolerance
Early/Late 8:24
Quantize 8:24
Special Uses 8:26
Touch Receive 6:19
Track 2:3
Blend 8:9
Block Copy 8:11
Block Move 8:12
Channel 3:8
Channel Assign 5:2
Clip 8:55
Clipboard 8:37
Copy 8:1
Creating 8:31
Delete
Midi Data 8:36
Display 4:8
Edit 8:31
Erase 8:3
Fill 8:10
Goto (Change Tracks) 4:5
Initialize 8:4
Insert
Midi Data 8:35
Layout 3:5
Length
Scale 8:48
Locate Beat 6:3
Monitor 6:11

Move 4:9, 4:18
Multi-Channel 8:60
Mute 6:11, 9:4
Name 3:5, 4:6, 4:18
Names
Assignments 3:9
Zap 5:12
Overlapping Notes 5:14
Port Assign 3:8, 5:4
Rename 4:20
Quantize 8:20
Quick Erase 8:4
Quick Save 7:14
Restrictions 5:14
Select All 6:12
Select 4:5, 4:9, 4:18
Setup Default 3:3
Solo 6:12
Standard MIDI Files 7:14
Subgroup 6:13
Transpose 8:6
Undo 3:6, 8:6
Unquantize 8:22
View Data 4:12
Track Map Selection Keys 4:17
Transmit All 5:6
Transpose 8:6
Global Edit 8:58
Keymap 6:33
Link 9:6
Link Mode 9:4
Region 8:7
Truncate Pattern 8:2
Truncate Pattern? 8:49
Tutorial 3:1
TXHELP 4:2
TXHELP.EXE 4:2
Txslowtrans 6:31
Typing Names 4:18
Undo 3:6, 8:5
Edit 8:35
Undo Buffer
Zap 5:13

Undo Last Change to Pattern 8:5
Velocity
    Allowable Range 8:56
    Clip 8:56
    Display 4:14
    Keymap 6:33
    Note-Off 4:14
    Scale 8:51
Version Display 4:20
Video Display Options 1:7, 4:1
    Color 4:2
    LCD 4:2
    Monochrome 4:2
    Quick 4:1
    Slow 4:1
Video Mode Switches 7:19
View 4:11
    Chase Events Table 6:30
    Locate Function 6:3
    MIDI Data Display 4:11, 4:12
    Multi-Track Display 4:11
    Note Sound Duration 8:34
Volume Controller 4:15
    Chase Events 6:29
VU Meter Levels
    Sync 10:7
Yamaha C1
    Install 1:6
Zap 5:12
    Clipboard 5:12, 8:39
    Pattern Range 5:12
    Track Names 5:12
    Undo Buffer 5:12