Composer's Mosaic

Version 1.44b7
Installation Guide and Tutorial

Contents

CHAPTER 1 Welcome!

Thank you for your interest in this public beta release of Mark of the Unicorn's Composer's Mosaic version 1.44b7.

We hope you enjoy using it.

FOR NEW MOSAIC USERS

If you are altogether new to Mosaic, this document helps you install Mosaic and then takes you on a brief guided tour. You may find it helpful to print a hard copy of this document because the graphics will be easier to read.

☞ Before you begin, you need to be aware that Mosaic requires Adobe's Sonata music font, which Mark of the Unicorn is not licensed to distribute on line. For information about obtaining Sonata, please contact Adobe at (800) 642-3623. If you are calling from outside the United States, dial (408) 986-6555.

FOR EXISTING MOSAIC USERS

If you are are already a registered Mosaic user, you will be pleased to know that this 1.44b7 beta version is being distributed publicly with no copy protection. This version has the following enhancements:

■ Mosaic is now accelerated for Power Macintosh.

■ Version 1.44b7 has many bug fixes and other enhancements.

☞ Mosaic 1.44b7 requires a 68020-based Macintosh or faster. It will no longer run on 68000-based machines such as the Macintosh Plus.

This version of Mosaic uses the same fonts and system extensions as Mosaic 1.41 and 1.43, so if you already have these versions of Mosaic installed on your Macintosh, you need not do a full install from the 1.44b7 installer disks. Instead, you can simply install the Mosaic application. This version does, however, include the latest shipping version of FreeMIDI (1.2.4) will up-to-date MIDI device support. So you may want to install FreeMIDI from these disks, if you use Mosaic's MIDI features.

Finally, existing Mosaic users don't really need to review the rest of this guide, which has an installation guide and tutorial that are almost identical to your Mosaic *Getting Started* manual.

FOR ALL USERS

Mosaic Version 1.44b7 beta is a pre-release version of the program. Please take this into consideration when you use the program, and take extra precautions in saving and backing up any important work you do with the program.

Mosaic 1.44b7 System Requirements

This chapter provides important requirements and recommendations for the following components in your Macintosh computer system:

- Type of Macintosh

- RAM (memory)

- Printer

- System software

- Adobe Type Manager™ (ATM)

- LaserWriter Driver 8.1.1 (for EPS exporting)

- FreeMIDI extension (required for MIDI recording and playback)

COMPUTER REQUIREMENTS & RECOMMENDATIONS

The minimum Macintosh needed to install and run Mosaic is a 68020-based Macintosh with a hard disk and a minimum of 4 megabytes (MB) of *random access memory* (RAM). A 68030, 68040, or PowerPC-based Macintosh is highly recommended. Mosaic 1.44b7 is acclerated for Power Macintosh.

RAM recommendations

For large scores, you may need a minimum of 5 megabytes, depending on the size of your system software and the amount of additional startup software or other applications you run at the same time as Mosaic.

The minimum required amount of RAM to run Mosaic in System 7 is 4 MB. These 4 megabytes can consist of actual memory (RAM) or virtual memory (although virtual memory is not recommended if you will be using Mosaic's MIDI playback and recording features), a process which uses space on the hard disk to emulate RAM. Refer to your System 7 documentation for information about virtual memory. Mosaic also supports the use of 32-bit memory mode.

To check how much RAM your Macintosh has, choose *About this Macintosh* (or *About the Finder* if you are running System 6) from the Apple menu and look for the Total Memory indication.

When you run Mosaic, the Memory Monitor displays the amount of free memory (RAM) available to Mosaic. Try to keep at least 100K free. To increase this amount in MultiFinder or System 7, quit Mosaic, select the Mosaic program icon, and choose Get Info from the File menu. Increase the application memory size in the Get Info window.

A large screen monitor is recommended

Mosaic supports large screen monitors such as the Apple full-page and two-page displays. These large monitors are not required, but they are highly recommended for Mosaic. They provide many benefits, such as the ability to:

- See the entire score page

- Zoom in to enlarge the music while still observing a large portion of it in the display

- Observe the contents of several windows simultaneously

Printer compatibility

Mosaic is compatible with the following printers:

- The Apple ImageWriter, ImageWriter II, and ImageWriter LQ

- Apple StyleWriter

- Apple LaserWriter (all models)

- Most third-party PostScript-compatible laser printers

- Most third party QuickDraw printers such as the Hewlett Packard DeskWriter™

- Postscript-compatible phototypesetting machines such as the Linotronic™

System software requirements

Your Macintosh computer will not run without the System and Finder files, which are located in the System Folder. When turned on, the Macintosh looks for the System Folder on the first disk you insert (or on the hard disk). System software is included with the purchase of every Macintosh.

Macintosh System software is periodically updated by Apple. For Mosaic to run successfully, use the most recent update of the System software, which you can obtain from your Apple dealer.

The earliest System that we recommend for use with Mosaic is System release 6.0.5, which consists of Finder 6.1.5 and System 6.0.5. (Mosaic is MultiFinder-compatible.) To obtain the version number of the System and Finder files, choose *About this Macintosh* (or *About the Finder* if you are running System 6) from the Apple menu just after you switch on the computer.

The Adobe Type Manager™ is required

Mosaic also requires the Adobe Type Manager (ATM). ATM is a font utility developed by Adobe Systems, Inc. that enhances the appearance of your music on the screen. It also improves the quality of printed output on non-postscript printers, such as:

- The Apple StyleWriter

- The Apple LaserWriter IISC

- The Apple ImageWriter LQ

- Third-party (non-Postscript) laser printers

For information about obtaining ATM, contact Adobe at (800) 642-3623. If you are calling from outside the United States, dial (408) 986-6555.

LaserWriter 8.1.1 (or higher) is required for EPS export

There are two ways to export music from Mosaic into other desktop publishing programs:

1. Copying and pasting

2. Exporting as encapsulated PostScript™ (EPS)

Both methods maintain highest-quality printed output. The copying and pasting method has no special requirements. The EPS export method requires LaserWriter 8.1.1 (or higher), which is printer driver software provided by Apple Computer for the LaserWriter series of printers. Contact your Apple Dealer for information about obtaining the LaserWriter software.

FreeMIDI is required for MIDI playback and recording

FreeMIDI is a System extension developed by Mark of the Unicorn. It allows Mosaic to record and play back music on a MIDI keyboard or sound module. FreeMIDI also provides you with:

- An intuitive environment in which to interact with your MIDI setup

- Unified MIDI system integration with other MIDI programs, such as Mark of the Unicorn's Performer sequencing software and Unisyn universal editor/librarian software

The section following the installation guide tells you everything you need to know about preparing your FreeMIDI studio configuration and getting Mosaic ready for MIDI playback and recording. To obtain FreeMIDI for this public beta release of Mosaic 1.44b7, download it from our web site (fttp://www.motu.com) or call (617) 576-2760 for a disk.

Installation Guide

This chapter provides step-by-step instructions for installing Mosaic. If you haven't already done so, review the system requirements in the last chapter to avoid trouble during installation and setup.

If you plan to record or play back your Mosaic scores via a MIDI keyboard or sound module, be sure to continue on to the next chapter after you finish this one. It contains important information about how to set up for MIDI playback and recording.

INSTALLING MOSAIC

Installing Mosaic is easy because the Mosaic disk has a program on it that does the installation automatically for you. To install Mosaic:

1 Disable all CDEV's (Control Panel Devices) and Extensions, including virus protection utilities such as SAM, Virex, Vaccine, Disinfectant, or GateKeeper during the installation process.

These files can sometimes interfere with installation. To do so under System 7, restart or turn on your Macintosh with the shift key held down until you see the message, "Extensions Off", which appears right after "Welcome to Macintosh". Doing so turns off all extensions until the computer is restarted. Under System 6, remove all non-Apple INIT's and Control Panels from your System Folder and then Restart your Macintosh. It is especially important to do this right before you install Mosaic and authorize the hard disk. Once the program has been installed and authorized, you can reenable them.

2 Insert Disk 1 of the Mosaic installer disks and run the installer by double-clicking the icon called "Double-click to install".

Double-click the installer, which does the entire installation automatically for you.

Just follow the directions that the installer gives you, and insert the appropriate disks when they are requested. When you finish, it may ask you to restart.

☞ If you have more than one hard disk, the installer only lets you install on hard disks that have a System Folder on them. If you want to install Mosaic on a disk that doesn't, install on a hard disk that does and then copy the Mosaic folder to the desired disk afterwards.

What does the installer do?

The installer checks the computer to make sure it meets the hardware and software requirements necessary to run Mosaic. If so, the installer places Mosaic in a Folder on the hard disk, along with several additional files, such as a folder containing demo files. The installer also adds Mosaic fonts, system extensions, and other necessary files to your Macintosh System Folder. The following table provides a summary. The information in this table is subject to change with each update of Mosaic.

Mosaic-related item:	What it is/does:
Mosaic™	The Mosaic application is placed in a Mosaic folder on your hard disk.
Mosaic demo files	This folder contains demonstration files that you can open with the Open command in Mosaic's File menu.
Mosaic templates	This folder provides files with several common voice, staff, and page lay-outs, from a lead sheet up to a full 40-staff orchestra score.
Tutorial Folder	This folder contains sample Mosaic music files necessary for the tutorials later in this guide.
Mosaic Screen Fonts	This font suitcase contains several screen fonts required by Mosaic, and they are placed in your System by the installer. The fonts are: Sonata and MosaicFont.
FretBoard Screen Fonts	This font suitcase contains the Fret-Board font screen bitmaps, and they are placed in your System.
MosaiFon FreBoa	These printer fonts are placed in the System Folder and provide high reso-lution display and printing for the three music fonts that Mosaic uses (Sonata, MosaicFont, and FretBoard).
FreeMIDI	This system extension is placed in your System Folder. It allows Mosaic to record and playback music from a MIDI device such as a keyboard or sound module. FreeMIDI also inte-grates Mosaic with other FreeMIDI programs in various ways.
FreeMIDI Folder	This folder is placed in your System Folder and contains files that are required by FreeMIDI.
FreeMIDI Applica-tions Folder	This folder is placed on the top level of your hard disk. It contains several programs that help you configure Fre-eMIDI and prepare Mosaic for MIDI recording and playback.
FreeMIDI Setup	FreeMIDI Setup is a program found in the FreeMIDI Applications folder. It allows you to create a FreeMIDI Con-figuration, which describes your MIDI studio to Mosaic and is required for MIDI recording and playback.
PatchList Manager	PatchList Manager is a program found in the FreeMIDI Applications folder. It obtains the names of the sounds in your MIDI synthesizers so you can choose them by name from Mosaic.

Serial Switch	If you have a Quadra 900, 950, or Mac-intosh IIfx, this system extension is placed in the Control Panels folder by the installer to allow MIDI communi-cation on the modem and printer ports. Without it, none of your MIDI software, including Mosaic, would work. Once it is installed, it must be set to "Compatible" mode.
Unicorn Power	If you have a Macintosh PowerBook 140, 145, 160, 165c, 170, 180, or 180c, this system extension is placed in the Control Panels folder by the installer to provide error-free MIDI communi-cation on the modem and printer ports. Without it, you might have trouble using Mosaic, as well as other Mark of the Unicorn software.

WHAT NEXT?

The rest of this chapter tells you several things you should know about authorizing and deauthorizing Mosaic. After you complete this chapter, what you do next depends on what you would like to do.

If you want to be able to record and play music on a MIDI instrument…

Turn to the next chapter to continue the installation process. You will use a program called *FreeMIDI Setup* to describe each of your MIDI devices to Mosaic so that Mosaic can successfully record and playback from them.

If you won't be using MIDI playback and recording…

You are finished with installation. Skip the next chapter and proceed to chapter 4, "About the Tutorials" for information about how to get started with Mosaic.

Preparing for MIDI Recording and Playback

Mosaic provides you with the ability to record, play back, and step-enter music via a MIDI keyboard or other instrument. You can:

■ Step-enter notes (one at a time) from your MIDI keyboard

■ Record music in real time by playing along with a metronome click

■ Split left- and right-hand keyboard parts onto two staves

■ Play back each voice (staff) on a separate MIDI instrument using a separate sound (as long as your MIDI hardware provides this capability)

INTRODUCING FREEMIDI
To provide you with these MIDI capabilities, Mosaic relies on *FreeMIDI*, a Macintosh system extension developed by Mark of the Unicorn. FreeMIDI provides many advantages for all Mark of the Unicorn MIDI software products. With regard to Mosaic, FreeMIDI provides you with:

■ A graphical representation of the MIDI devices in your studio

■ Patch lists, which make it easy for you to choose sounds by name from within Mosaic

This chapter takes you through the process of setting up FreeMIDI, which Mosaic requires for MIDI input and playback.

You can skip this entire chapter if…
If you do not plan to use Mosaic's MIDI recording and playback capabilities, you can skip this entire chapter. You can also skip it if you already have another FreeMIDI-compatible program, such as Performer 5.0 (or higher), for which you have already created a FreeMIDI configuration and successfully achieved MIDI playback and recording.

SETUP OVERVIEW & QUICK-START GUIDE
Below is an overview of the process you will go through in this chapter. It is fairly simple and will probably take between fifteen and twenty minutes.

If you already have some experience with the Macintosh, MIDI, or Mark of the Unicorn software, and you are in a hurry, this overview should give you a pretty good idea of what you need to do to make the transition to FreeMIDI. A page number is included next to each step so you can get more detailed information about that step.

To install FreeMIDI:

1 Set up your MIDI gear. (page 12)

Make sure that your MIDI gear is connected and turned on, including your MIDI interface.

2 If you have Virtual Memory turned on in your Memory Control Panel, turn it off.

3 If you use OMS, decide if you want to use FreeMIDI instead, and, if so, install the OMS emulator.

FreeMIDI can emulate the Opcode MIDI System™ (OMS), allowing you to completely remove OMS from your system if you like. If you use software that requires OMS, you have two choices:

■ You can remove OMS (by dragging the OMS system extension out of the System Folder) and install the OMS emulator (by doing a Custom Install from the Mosaic installer disks).

■ You can use both OMS and FreeMIDI independently.

4 Run FreeMIDI Setup. (page 13)

This application is located in the FreeMIDI Applications folder.

5 Set the FreeMIDI System Preferences to tell FreeMIDI Setup which serial ports to search for MIDI interfaces. (page 11)

The preferences dialog should appear automatically. If it doesn't, choose FreeMIDI Preferences from the File menu.

6 In the Quick Setup dialog box, choose the method you will use to indicate which devices you have in your MIDI studio.

Click Continue to define each device one at a time (page 18) or, if possible, define them automatically using one of several shortcuts. Use the shortcut that best suits your situation:

1. Make FreeMIDI search your MIDI interface ports for all the devices in your studio automatically. This only works for devices that are connected with both their MIDI IN and MIDI OUT. Click Auto Config in the Quick Setup dialog box. (page 16)

2. Open an existing Performer (version 4.2 or earlier), Digital Performer (version 1.4 or earlier), or OMS (version 1.2.1 or earlier) configuration file. The Performer configuration can be loaded from any source, either a regular Performer file or a separate configuration file. Click Cancel and choose Open from the File menu. (page 19)

7 Use the Save command in the File menu to save the FreeMIDI Configuration to any location on your hard disk.

8 Use the *Check Connections* command in the MIDI menu to make sure that FreeMIDI is successfully sending and receiving MIDI data to and from your MIDI devices. (page 23)

9 Quit FreeMIDI Setup.

You will now be ready to use any FreeMIDI-compatible software. You do not need to keep FreeMIDI Setup open.

10 To set up patch lists, go to chapter 7, "Using PatchList Manager" (page 83).
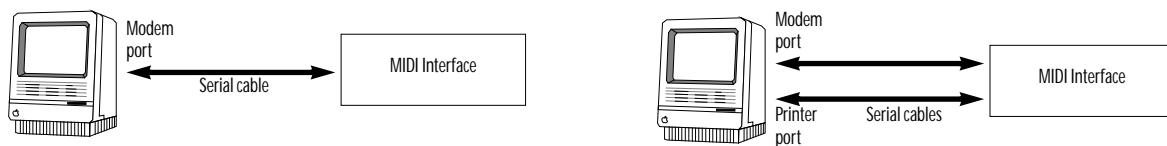
Figure 4-1: Connecting a MIDI interface to a Macintosh.
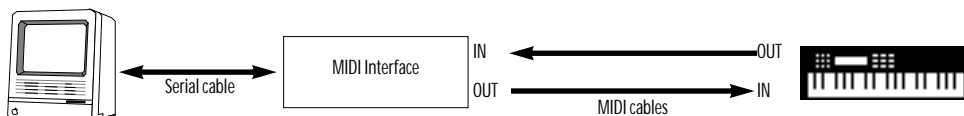
Figure 4-2: Connecting a single MIDI device. Connect the device's MIDI OUT and MIDI IN ports to the MIDI interface as shown here.
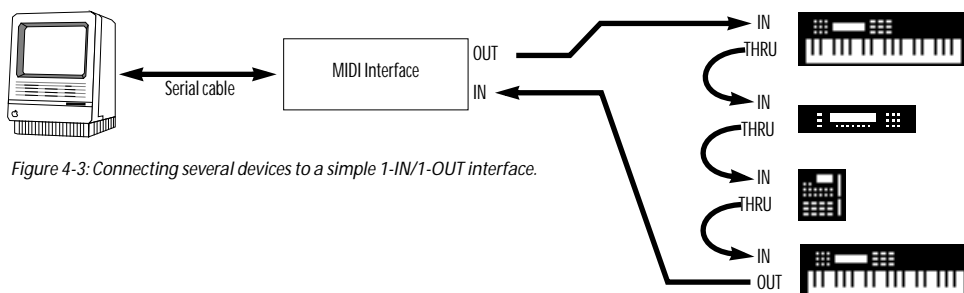
Figure 4-3: Connecting several devices to a simple 1-IN/1-OUT interface.
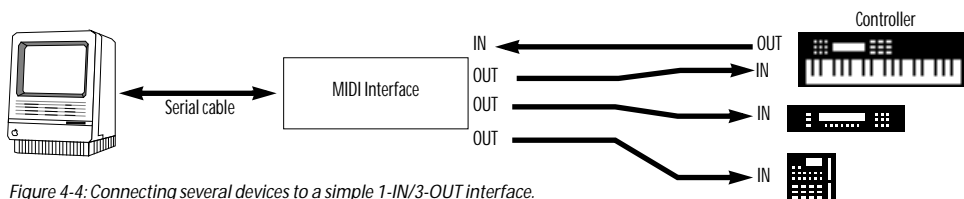
Figure 4-4: Connecting several devices to a simple 1-IN/3-OUT interface.
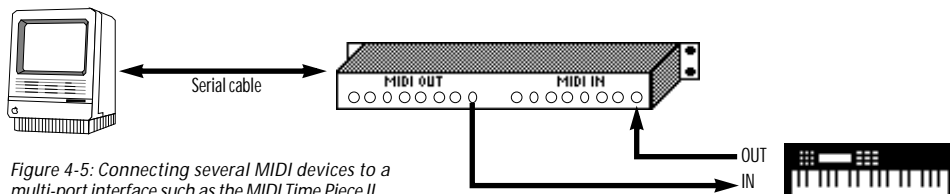
Figure 4-5: Connecting several MIDI devices to a multi-port interface such as the MIDI Time Piece II.

SETTING UP YOUR MIDI EQUIPMENT

Before you set up FreeMIDI, connect your MIDI hardware to the Macintosh. To so do, you will need:

- Any standard MIDI/Macintosh interface
- At least two MIDI cables
- At least one MIDI device

1 Make sure the Macintosh is turned off.

2 Connect the MIDI interface to the Macintosh.

Refer to the owner's manual of the interface for specific directions. Mosaic

Printer port icon   Modem port icon

can send and receive MIDI information through *both* the modem and printer serial ports on the back of the Macintosh. If your interface connects to only one port, connect it to the modem port. Unless you have a large MIDI studio, you'll want to connect a printer to the printer port so that you have quick access to printing. If you connect a MIDI interface to the printer port, you'll have to always temporarily disable MIDI software settings in Mosaic before printing, which is inconvenient. If you have a MIDI Time Piece II or a MIDI Express interface, connect it to the modem port. If you have a large MIDI rig, you can connect two separate interfaces, one to each port, or a single interface that attaches to both.

3 Connect your MIDI device(s) to the interface as shown in one of the diagrams on page 11.

SETTING UP FREEMIDI

Once your MIDI hardware is connected to the computer, you are ready to begin setting up FreeMIDI.

Installing FreeMIDI

FreeMIDI is automatically installed in your System Folder when you install Mosaic as described in the previous chapter.

Turn off Virtual Memory

If you have Virtual Memory turned on in your Memory Control Panel, turn it off.

OMS compatibility

If you currently use the Opcode MIDI System (OMS) and it is required for OMS applications that are not yet FreeMIDI-compatible, you can use FreeMIDI to emulate OMS. Simply remove the OMS extension from your System Folder and install FreeMIDI's OMS Emulater extension by doing a custom install from the Mosaic installer disks.

FreeMIDI Setup can read OMS configuration files created by OMS 1.2 and 1.21 and translate them into FreeMIDI configurations. Please read on for more information on this feature.

MIDI Manager compatibility

If you need to use applications that require MIDI Manager and do not yet support FreeMIDI, we recommend that you proceed now to Appendix B, "FreeMIDI and MIDI Manager" on page 105 of this guide for information on installing the FreeMIDI MM Driver for MIDI Manager. After installation the FreeMIDI MM Driver, please return to this page to continue your FreeMIDI configuration session.

What is a FreeMIDI configuration?

A *FreeMIDI configuration* is a file that you create and save on your hard disk using a program called *FreeMIDI Setup*. The file contains a graphical representation of the MIDI hardware devices in your studio, and it shares this list of devices with all FreeMIDI applications.

Here is an overview of the process we will go through in this chapter to create it:

1. Run FreeMIDI Setup.
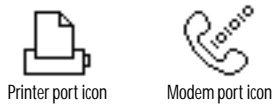
2. Set the FreeMIDI System Preferences to tell FreeMIDI Setup which serial ports to search for MIDI interfaces.

3. Create your FreeMIDI Configuration by defining each device one at a time or, if possible, by defining them automatically using one of several shortcuts.

4. Save the FreeMIDI Configuration to disk.

5. Use a feature called *Check Connections* to make sure that FreeMIDI is successfully sending and receiving MIDI data to and from your MIDI devices.

Launching FreeMIDI Setup

Locate the FreeMIDI Setup program. During Mosaic installation, it is placed in the FreeMIDI Applications folder on the top level of your hard disk.

1 Double-click the FreeMIDI Setup application icon to launch the program.

After the initial splash screen, the *Welcome to FreeMIDI* dialog box appears:
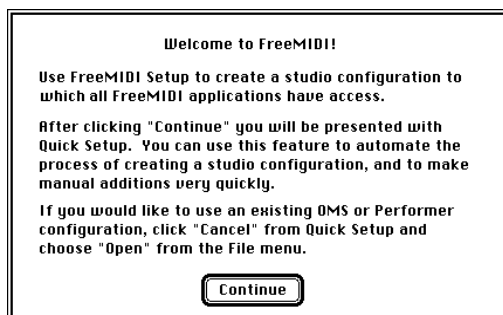
2 Click Continue.

The FreeMIDI Preferences dialog box appears. The FreeMIDI Preferences dialog box is where you tell FreeMIDI how you want it to handle certain aspects of its operation. Each preference option is explained in the following sections.
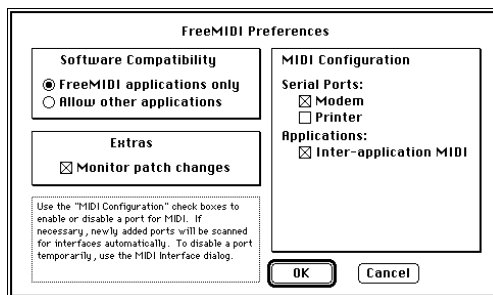
Figure 4-6: FreeMIDI Preferences Dialog Box.

Software Compatibility

If you wish to use MIDI applications that do not support FreeMIDI at the same time as FreeMIDI-compatible applications, click *Allow other applications*. This allows non-FreeMIDI applications to have access to the Macintosh serial ports while FreeMIDI applications are running. The trade-off is that when this option is chosen, FreeMIDI-compatible applications cannot play MIDI in the background.

If you will only be using FreeMIDI-compatible MIDI applications, click *FreeMIDI applications only*. This allows FreeMIDI applications to play MIDI in the background.

Some FAX/modem and networking software can cause conflicts with other software, such as FreeMIDI, that needs to use the serial ports. If you have FAX/modem software and it needs to be active while you are working with FreeMIDI applications, you may need to choose the *Allow other applications*. Even this may not work. If it continues to cause conflicts, you may need to disable such software while using FreeMIDI. It may take some experimentation to find out what settings work best.

MIDI Configuration

Click the check box for each serial port (modem and printer) to which you have a MIDI interface connected. Be sure that you connect and power up all the MIDI interfaces that you will be using, because FreeMIDI has the ability to automatically find most of your MIDI gear.

Inter-application MIDI Communication

If you wish to be able to send MIDI data between FreeMIDI-compatible applications, click the Inter-application MIDI check box. This option uses up some Central Processing Unit (CPU) overhead, so leave this option turned off unless you know you will be using it. You can always enable it a later time.

Extras

If you wish to have any patch changes that are sent by FreeMIDI updated in real-time for all your FreeMIDI applications, click the Monitor Patch Changes check box. For example, if you choose to monitor patch changes, the patch column in Mosaic's Tracks window will always correctly display the last patch change sent to each device. This option uses up some Central Processing Unit (CPU) overhead, so if you find your Mac is working too slowly when using FreeMIDI applications, try leaving this option turned off.

3 Once you have reviewed the options above, set the FreeMIDI Preferences the way that you want.

4 Before you click OK, check to be sure that your MIDI interfaces are connected and powered-up.

5 Click OK to confirm your preference settings.

When you click OK, FreeMIDI Setup scans the serial port(s) that you have selected for MIDI interfaces. At the time of this writing, FreeMIDI can recognize an MTP, MTP II and MIDI Express. When drivers are written to support other interfaces, FreeMIDI will be able to recognize these interfaces as well.

6 If you selected the printer port option under MIDI Configuration, and AppleTalk is enabled on the printer port, a warning alert box appears to ask if you would like to claim the printer port for MIDI.
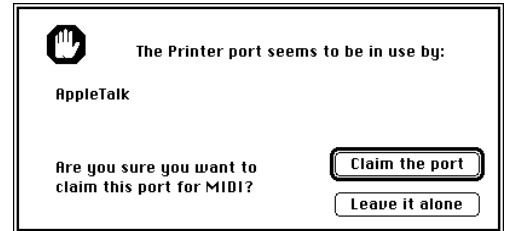
If you are using AppleTalk for network communications or an AppleTalk printer, you should click *Leave it alone* and re-think your MIDI studio setup. Otherwise, click *Claim the port* and FreeMIDI will be able to use the printer port for MIDI. If you do so, remember to disable AppleTalk in the Chooser when you are through configuring FreeMIDI in order to avoid seeing this warning alert again. If you are using AppleTalk for an Ethernet network and your Ethernet connection is made via NuBus or SCSI or some other bus that does not utilize the printer port, FreeMIDI should not ask about disabling AppleTalk and network communications should not be interrupted.

7 If there are interfaces in your setup that are not powered on or connected properly, FreeMIDI Setup will not be able to find them.

If FreeMIDI cannot find any interfaces, the No Interface Found dialog will appear:
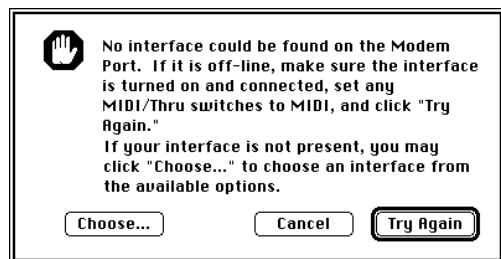
Figure 4-7: No interface Found Dialog Box.

Check the connections and power switches and any MIDI/Thru switches on your interfaces and click Try Again. If your interfaces are not currently connected or not powered on, you can still create a FreeMIDI configuration at this time, but you will need to use the Choose Interfaces feature. For more information, see "Working with Off-Line Interfaces" on page 219 in the Mosaic Reference Manual. If FreeMIDI Setup cannot find some or all of your interfaces and you believe that they are connected properly and are powered on, proceed to Appendix C, "Troubleshooting FreeMIDI" on page page 109 of this guide.

Setting up your FreeMIDI configuration

After finding all the connected MIDI interfaces in your MIDI studio, the About Quick Setup dialog box appears:
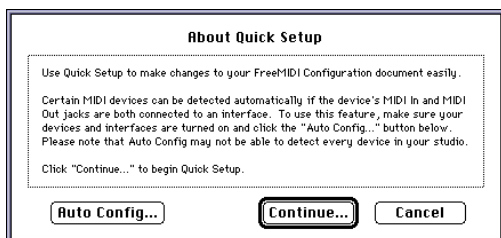
Figure 4-8: About Quick Setup Dialog Box.

At this point, the step you take next depends on the method for configuring FreeMIDI that you wish to use. There are three methods for configuring your MIDI studio:

Configuration method:	Explanation:	What you should do:
Automatic configuration	FreeMIDI automatically scans the MIDI devices connected to your interface and includes them in your FreeMIDI configuration file.	Click the Auto Config button and proceed to "Configuring Your studio automatically" on page 15.
Manual Configuration	You indicate each MIDI device that you have from a pop-up menu and make a few settings for each device.	Click the Continue button and proceed to "Adding devices manually with Quick Setup" on page 18 in this chapter.
Translating an existing configuration file	You open an existing configuration file from Performer, Digital Performer, or OMS, and your FreeMIDI configuration is set up to match it as closely as possible.	Click Cancel and proceed to "Translating Performer, Digital Performer, or OMS files" on page 19 in this chapter. This method can save you time if you have such an existing file and you have a large MIDI studio.

Configuring Your studio automatically

If you clicked *Auto Config* in the About Quick Setup dialog box, the Auto Config dialog box appears:
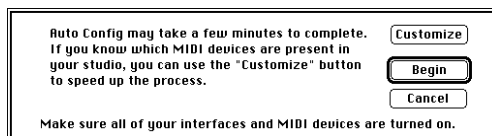
Figure 4-9: Auto Config Dialog Box.

How Auto Config works

Auto Config scans your MIDI interface(s) and tries to detect each MIDI device automatically. (For those of you who know a little bit about MIDI, this is accomplished with system exclusive messages that are unique to each instrument.) Auto Config

can detect most MIDI keyboards, sound modules, and similar devices, although it can't detect *every* MIDI device ever created. As a result, it will find most––and hopefully all––of your devices, depending on which ones you have. Later, you can add the ones it misses.

As you can see, FreeMIDI needs to be able to send MIDI data to the device, and it needs to be able to receive data back. As a result, before you proceed, be sure that all your MIDI gear is turned on and connected to your MIDI interface(s) properly. For Auto Config to find your MIDI devices, they need to have both their MIDI inputs and outputs connected to your interfaces. If you know how to do so, enable system exclusive transmit and receive on any MIDI devices that have such a setting. If you do not know how to do this, don't worry. Many devices do not even have a setting for this function, and you can configure them manually instead.

☛ If you have a MIDI device that echoes (merges) incoming MIDI data to its MIDI out, this may cause errors during the Auto Config process. For best results, we recommend disabling this feature. Unfortunately, in some MIDI devices, echoing cannot be disabled. If this is the case, we recommend powering off these units until Auto Config is complete. You can then power them back up and add them to your FreeMIDI configuration manually. Some examples of such devices are the Yamaha KX-88 and Roland SBX-80.

☛ Due to their MIDI implementation, some MIDI devices may display "MIDI Buffer Full", "MIDI Overflow error" or "device ID number mismatch" error messages in their front-panel LCD during Auto config. This is due to the large number sysex messages that are sent to each device. Don't worry. This is harmless. (Hopefully, more and more manufacturers will support the universal MIDI device inquiry message, which will prevent messages like these.)

☛ Some MIDI devices may be found more than once because they are able to respond to more than once device ID at a time. If possible, try to set these devices to a single ID before using Auto Config.

Deciding whether or not to customize before you begin

As you can imagine, it takes time for Auto Config to scan for each of the hundreds of possible MIDI instruments that FreeMIDI knows about. Auto Config will take several minutes––more if you have one or more multiport interfaces with lots of MIDI ports on them.

If you want, you can customize Auto Config to search only for the instruments you have in your studio. This makes the whole process much faster. If you are not sure which MIDI devices are in your studio, or if you do not wish to spend time customizing Auto Config, click *Begin* and FreeMIDI will start searching your studio for MIDI devices. If you do know what devices you have in your studio, proceed now to "Customizing Auto Config" on page 17.

Using Auto Config without customizing

After you click Begin, FreeMIDI checks every cable on all of your MIDI interfaces for all the MIDI devices about which it knows. The piano keyboard progress bar gradually fills up as FreeMIDI searches your studio for MIDI devices as shown below.

piano keyboard progress bar

Figure 4-10: Auto Config Progress Window.

As FreeMIDI finds MIDI devices, it lists them in the status box below the piano keyboard. If you have the *FreeMIDI Applications only* option set in the FreeMIDI preferences, you can even switch out of FreeMIDI Setup to another application and FreeMIDI will continue searching your studio for MIDI devices while you do other work on your Macintosh! If you have the *Allow other applications* option set in the FreeMIDI preferences, you can still switch to another application during the Auto Config procedure, but FreeMIDI will stop searching for MIDI devices until you switch back into the FreeMIDI Setup application.

Click *Stop* if you want to interrupt the search process at any time and Auto Config will stop searching for MIDI devices. The Quick Setup dialog box opens and displays all the devices found up to that point.

This search can take several minutes depending on the number of MIDI devices and the type and number of MIDI interfaces in your studio.

Keep in mind that Auto Config may not be able to find *all* the MIDI devices in your studio. It is also possible that one MIDI device from a manufacturer could not be distinguished from another, closely-related MIDI device from the same manufacturer. An example of this is the Korg

M1 family, which consists of the M1, M1R, M1EX, and M1REX. Auto Config will probably find all of these units and identify them all as Korg M1's. To fine-tune and finalize your configuration, proceed to "Adding devices manually with Quick Setup" on page 18.

Customizing Auto Config

If you know which MIDI devices are in your studio, click *Customize* so that you can tell FreeMIDI for which devices to search. This can greatly decrease the amount of time it takes for Auto Config to find your MIDI devices. After clicking *Customize...*, the Customize dialog box appears:
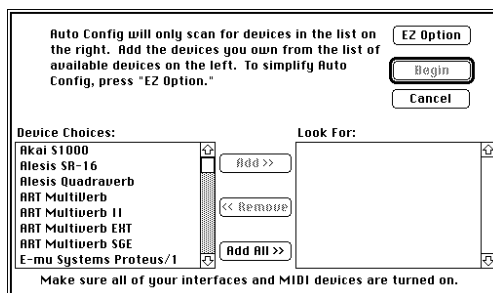
Figure 4-11: Auto Config Customize Dialog Box.

If you do not want to continue with Auto Config at this time, click *Cancel* and an empty FreeMIDI Configuration window appears. Choose *Quit* from the File menu to exit FreeMIDI Setup.

If you change your mind and no longer want to customize Auto Config, but you still want FreeMIDI to search for MIDI devices and configure your studio automatically, click *EZ Option* to return to the Auto Config dialog box and proceed to "Using Auto Config without customizing" on page 16.

Otherwise, begin customizing Auto Config as follows:

1 Select a device or devices from the list on the left and click *Add*.

To select more than one device, command-click each device that you wish to add. Shift-drag to select multiple devices that are together in the list. To select all the devices from the list at once, click *Add All.*

2 If you accidentally add a device or some devices for which you do not want FreeMIDI to search, select the device or devices from the list on the right and click *Remove.*

3 Keep adding devices until you have told FreeMIDI about all the devices in your studio that are in the list.

4 When you are done, click *Begin.*

FreeMIDI proceeds to check every cable of all of your MIDI interfaces for all the MIDI devices you have defined. You'll see the progress dialog box shown Figure 4-10 on page 17.

The piano keyboard progress bar as shown in Figure 4-10 gradually fills up as FreeMIDI searches your studio for MIDI dev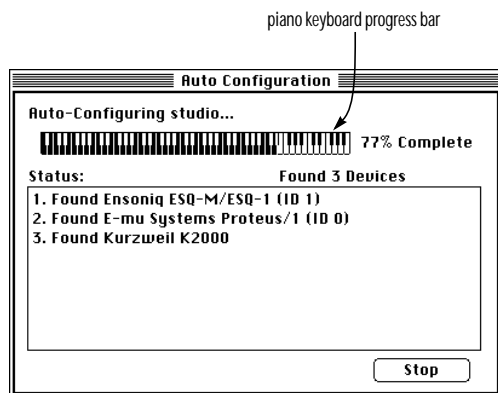ices. As FreeMIDI finds MIDI devices, it lists them in the status box below the piano keyboard. If you have the *FreeMIDI Applications only* option set in the FreeMIDI preferences, you can even switch out of FreeMIDI Setup to another application and FreeMIDI will continue searching your studio for MIDI devices while you do other work on your Macintosh! If you have the *Allow other applications* option set in the FreeMIDI preferences, you can still switch to another application during the Auto Config procedure, but FreeMIDI will stop searching for MIDI devices until you switch back into the FreeMIDI Setup application.

Click *Stop* if you want to interrupt the search process at any time and Auto Config will stop searching for MIDI devices. The Quick Setup dialog box opens and displays all the devices found up to that point.

Keep in mind that Auto Config may not be able to find *all* the MIDI devices in your studio. It is also possible that one MIDI device from a manufacturer could not be distinguished from another, closely-related MIDI device from the same manufacturer. An example of this is the Korg M1 family, which consists of the M1, M1R, M1EX, and M1REX. Auto Config will probably find all of these units and identify them all as Korg M1's. To fine-tune and finalize your configuration, proceed to the next section, "Adding devices manually with Quick Setup".

Adding devices manually with Quick Setup

At this point, you have completed one of the following:

■ You have just completed the Auto Config process (the search is 100% complete).

■ You have just translated a Performer, Digital Performer, or OMS file and have skipped to this step.

■ You have just clicked the Quick Setup button to configure your studio manually.

In any case, you now see the Quick Setup dialog box on-screen as shown below in Figure 4-12.
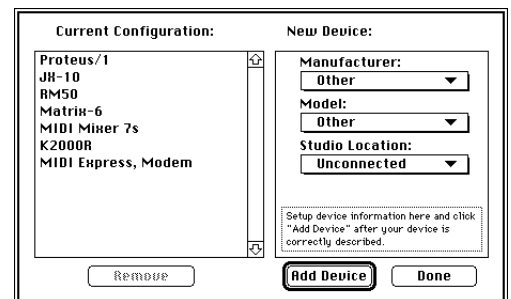

Figure 4-12: Quick Setup Dialog Box.

This dialog box contains a list of all the MIDI devices that were found by Auto Config or by the file translation process on the left side under the label *Current Configuration*. If you have not used

Auto Config and are configuring your studio manually, this list currently displays only the MIDI interfaces in your studio.

If all the MIDI devices in your studio already appear in the list, you are done! Click *Done* and the FreeMIDI Configuration window will appear containing all your MIDI devices and their connections.

If there are no devices listed, or the list is incomplete, you will now need to tell FreeMIDI about these devices manually.

To add devices in the Quick Setup dialog:

1 Select the correct manufacturer, model, studio location and cable (if applicable) from the pop-up menus on the right and then click *Add Device*.

If the pop-up menus do not contain a description of a particular device, choose *Other* and click *Add Device*. The first generic device you add is given the name *Device-1*. You will learn how to re-name and re-define these devices later in this tutorial.

2 If you accidentally add a device to the list that you do not want to appear in your studio configuration, select its name from the list on the left and click *Remove*.

3 If Auto Config found devices that are not the exact model installed in your studio, such as a Korg M1 instead of a Korg M1R, you can easily edit these devices.

Select the device on the right and click Remove. Now choose a new model from the pop-up menu on the right and click add. A new device is added with the same manufacturer and studio location.

4 When you have added all the devices to the list that are in your studio, click *Done*.

The FreeMIDI Configuration window appears, displaying all of your MIDI devices and their connections.
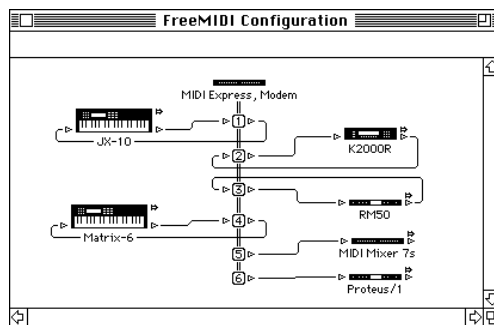
Figure 4-13: FreeMIDI Configuration Window.

Translating Performer, Digital Performer, or OMS files

FreeMIDI Setup can open configuration files created by Performer 4.2, Digital Performer 1.4, or OMS Setup 1.2 or 1.21 and create a FreeMIDI configuration which closely matches this configuration. This can save a considerable amount of setup time. When translating Performer and Digital Performer configurations, you can open either a regular Performer/Digital Performer file or the configuration file, which may be saved separately.

To translate any of these files:

1 Choose Open from the File menu. Alternately, you can type command-O on your Mac keyboard.

A standard Macintosh File Open dialog box opens.
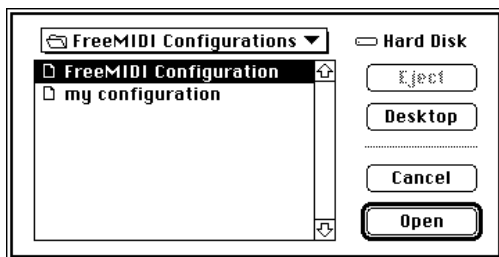
Figure 4-14: Macintosh File Open dialog box.

2 Select the Performer, Digital Performer, or OMS Setup file that you wish to translate and click Open.

Use the directory pop-up menu to navigate to the disk and folder that contains the configuration you wish to translate. See your Macintosh owner's manual for more information on opening files and navigating to disks and folders.

The selected file is translated as closely as possible into a FreeMIDI configuration.

If, after the translation process, all of your MIDI devices now appear in the FreeMIDI Configuration window and are connected to the proper MIDI interface input and outputs, proceed to "Arranging the FreeMIDI Configuration window" on page 20 in this chapter for the next steps in the configuration process.

You may find, however, that some devices are misnamed, missing, incorrectly duplicated, or improperly defined. If so, you will need to edit the configuration using Quick Setup:

1 Choose *Quick Setup* from the Configuration menu

The About Quick Setup dialog box appears.

2 Click *Continue...*

The Quick Setup dialog box appears.

3 Proceed to "Adding devices manually with Quick Setup" on page 18.

Arranging the FreeMIDI Configuration window
You can arrange the FreeMIDI Configuration window any way you like. We suggest that you drag device icons so that they appear as they do in your studio. For instance, you can arrange all the modules, which are in a rack to the left of your Mac, to the left side of the window and all the modules, which are in a rack to the right of your Mac, to the right side of the window. You can drag the patch cords, which connect the devices to the interfaces, up or down so that you can view the connections clearly. You can drag MIDI ports in a multi-cable interface, such as the MTP, MTP II or MIDI Express, up or down to create more or less space between them. You can delete input or output cables, which are not part of your studio setup, by clicking the patch cord to select it and typing the backspace or delete key on your Mac keyboard. You can also make and break connections by just dragging the ends of the patch cords. You can use the different options in the Views menu to change the size of the icons and to view input and outputs separately or together.
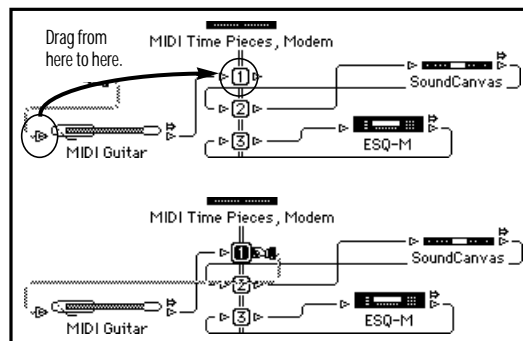

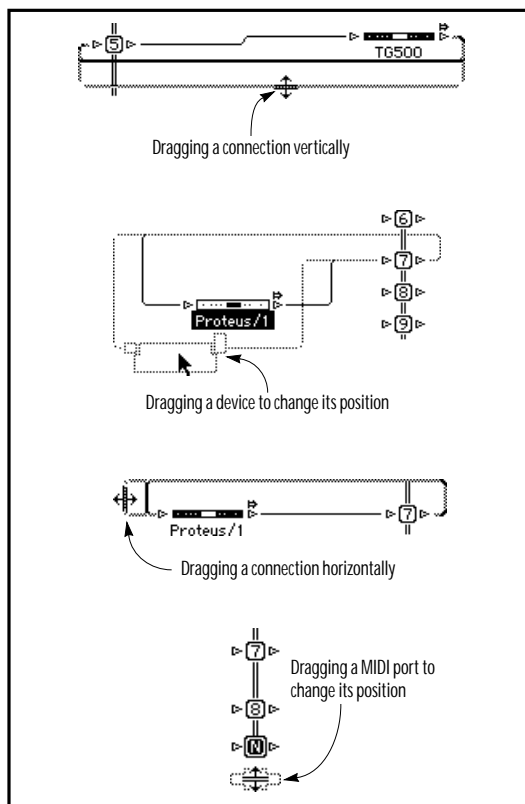*Figure 4-15: Connecting a device to an interface output.*

Figure 4-16: Arranging FreeMIDI devices and connections.

The Clean Up Window Command

You can use the Clean Up Window command in the Views menu to quickly arrange all the devices in the window into uniform columns.

Making MIDI thru connections

When more than one MIDI device shares a single output port from a MIDI interface, you need to connect the MIDI Thru port of the device to the input of the other device. This mirrors the physical connection that you should have between the devices.
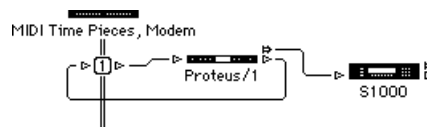
Figure 4-17: MIDI Thru Connections.

Making multiple MIDI input connections

FreeMIDI Setup allows you to connect more than one MIDI output from a device to a single MIDI input on an interface. When you make such a connection, you are telling FreeMIDI that both devices' MIDI outputs are connected to a single MIDI input on an interface. Without some type of MIDI merger, this type of connection is not possible.

Connecting devices to other devices

FreeMIDI Setup allows one connection per port (input output, or thru) on each device. You cannot connect devices to each other except from MIDI Thru to MIDI In of a separate device. If you would like to make such connections, use the Cable Routing (on MIDI Time Piece and MIDI Express interfaces) or similar features in your MIDI interface or MIDI patch bay/merger gear.

MidiLocate

MidiLocate is a unique feature designed to make adding devices to your FreeMIDI configuration easier. In this mode, FreeMIDI automatically determines the proper input cable to which a device is physically attached and then displays this connection in the FreeMIDI Configuration window.

MidiLocate is a checkable menu item. This means that its state (on or off) is toggled each time you choose it from the menu. When there is a check next to the MidiLocate menu item in the MIDI menu, MidiLocate is enabled.

To use MidiLocate:

1 Select a FreeMIDI device in the FreeMIDI Configuration window.

2 Check to be sure that MidiLocate menu item in the MIDI menu is enabled.

The MidiLocate command should have a check next to its name. If it does not, choose it to select it. You can also use the Mac keyboard shortcut to toggle the state of MidiLocate by typing command-L.

3 Play some MIDI data from the MIDI device.

FreeMIDI will determine from where the MIDI data is coming and redraw the FreeMIDI Configuration window to indicate the appropriate connection.

Here is an example of MidiLocate in action. Let's say you have a Kurzweil K2000 that is connected to some MIDI input on your MTP II, but you are not sure which input:

1 Add a K2000 FreeMIDI device your configuration using *Quick Setup* or *Create Device*.

2 Enable MidiLocate.

3 Select the K2000 device.

4 Play some notes on its keyboard or send some other MIDI data from it and the K2000 device automatically is connected to the correct MIDI input port on your MTP II in the FreeMIDI Configuration window.

Saving the FreeMIDI configuration

Once you have a FreeMIDI configuration, it is a good idea to save it to disk so that you will not have to configure FreeMIDI for your studio again.

To save your configuration:

1 Choose Save from the File menu. Alternately, you can type command-S on your Mac keyboard.

A standard Macintosh File Save dialog box opens.
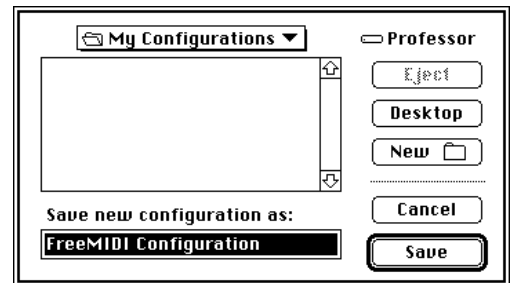
Figure 4-18: Macintosh File Save dialog box.

2 Use the suggested name "FreeMIDI Configuration" or enter another name for your configuration, if you like, and click *Save* or click *Cancel* to cancel the operation.

Use the directory pop-up menu to navigate to a disk and folder in which you wish to save this configuration.

☛ If you are using System 7, you can use the New Folder button to create a new folder in which to save this configuration and others that you might create in the future. See your Macintosh owner's manual for more information on saving files and navigating to disk and folders.

The current FreeMIDI configuration

There is no need to make this configuration "current". Whichever configuration is visible in the FreeMIDI Configuration window is the current configuration that all FreeMIDI applications will use. Whenever you launch FreeMIDI Setup to view

or edit your FreeMIDI configuration, the configuration document with which you were last working is opened automatically.

Testing for MIDI input and output

You are almost done setting up your FreeMIDI configuration. The last thing you need to do is test the MIDI connections between your MIDI devices and FreeMIDI. To test for MIDI input and output:

1 Choose *Check Connections* from the MIDI menu.

This command puts FreeMIDI Setup in a special studio testing mode which allows you to easily test MIDI inputs and outputs. When the menu item is checked, Check Connections mode is enabled and the mouse cursor will change to the Check Connections cursor as shown in Figure 4-19 below.

Figure 4-19: Check Connections mouse cursor.

2 Check MIDI input by playing notes on your MIDI controllers or sending other MIDI data such as patch changes, controller data or system exclusive data from your other MIDI modules.

When FreeMIDI is receiving MIDI correctly in Check Connections mode, the MIDI port to which the MIDI device sending the MIDI data is connected will flash the eighth note symbol as shown in Figure 4-20 below. If no activity is indicated, check to be sure that the MIDI device that is sending the data has its MIDI output connected to the proper MIDI input on your MIDI interface.
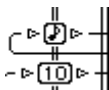

Figure 4-20: Incoming MIDI Data indicator.

3 Check MIDI output by clicking devices.

In Check Connections mode, FreeMIDI Setup generates a C major chord on the default play channel and sends it to the MIDI output to which the device you click is connected. If all is well, this device should play the C major chord. If the MIDI device does not play notes, check to be sure that the MIDI device has its MIDI input connected to a MIDI output on your MIDI interface.

You are now ready for MIDI recording and Playback

Now that you have a FreeMIDI configuration that can send MIDI data to and receive MIDI data from all the MIDI devices in your MIDI studio, you are ready to begin using the MIDI features in Mosaic.

All of your FreeMIDI configuration devices appear in Mosaic throughout the program in places where you choose MIDI devices for playback and recording.

Quitting FreeMIDI Setup

You can now quit FreeMIDI setup by choosing Quit from the File menu. You do not need keep FreeMIDI Setup open. The only time you need to open FreeMIDI Setup is when you would like to make changes to your FreeMIDI studio configuration. Conversely, you can open FreeMIDI Setup at any time, even while you have other FreeMIDI-compatible programs open.

Where to go next

You have now completed all the necessary preparations to use all of Mosaic's powerful features. Where you go next depends on what you would like to do.

If you would like a general tutorial about Mosaic…

Turn to the next chapter to get started.

If you would like to be able to choose sounds (patches) on your MIDI synthesizer by name in Mosaic…
Turn to chapter 7, "Using PatchList Manager" (page 83) of this guide. It discusses how to load lists of sounds into FreeMIDI.

If you would like to learn more about MIDI input and playback…
See chapter 34, "MIDI Recording and Playback" (page 199) in the Mosaic Reference Manual.

If you would like to learn more about FreeMIDI…
This chapter has told you the basic things you need to know about FreeMIDI to use MIDI input and playback in Mosaic. However, FreeMIDI provides much more. For example, you can create your own icons for your MIDI devices in the FreeMIDI configuration. As another example, you can connect Mosaic's transport controls (play, stop, rewind) to another FreeMIDI application, like Performer, so that they play together. For more information, see the FreeMIDI chapters in the Mosaic Reference Manual.

A Guided Tour of Mosaic

This chapter introduces you to Mosaic by taking you on a guided tour of a completed lead sheet document. You'll get familiar with Mosaic's symbol palettes, page layout features, and more. You'll also learn how to navigate Mosaic's windows, menus, and mini-menus.

Exiting the tutorial at any time

If, for some reason, you need to stop when you are in the middle of the tutorial, do the following to stop the tutorial and exit Mosaic:

1 Choose the Quit command from the file menu.

If the computer does not allow you to access the menu, a dialog box is probably open. Click Cancel, and then try choosing Quit again.

2 If Mosaic asks if you would like to save the changes you have made, click No.

This exits the program without saving anything permanently to disk. This is OK because the tutorial is just for practice, and you can recreate it again later, if you like.

Rest easy and have fun

Don't worry about making mistakes during the tutorial. There is nothing you can do "wrong". Nor is there anything you can do hurt the computer or the software. If you get stuck, you can always quit as described in the section above.

Your screen may not match the tutorial exactly

At times, you may encounter a situation where your screen does not exactly match the tutorial. Don't panic. The tutorial tries to cover most of these scenarios. Usually, you'll be able to either proceed anyway, or you can use the Windows and Palettes menus to get back on track.

Opening Mosaic

Let's begin by opening Mosaic. To do so, double-click the Mosaic program icon located in the Mosaic Folder on your hard disk. If you haven't moved the Mosaic folder since completing installation, it is located on the top level of your hard disk. You can get to it by double-clicking the hard disk icon to open the hard disk window.

The Mosaic program icon
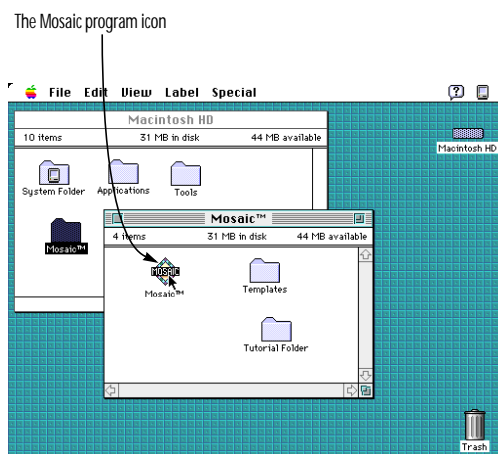
Figure 5-1: Double-click the Mosaic program icon in the Mosaic folder window to open Mosaic.

After a moment, you'll see the Mosaic symbol palettes appear, along with the Mosaic menu bar.

If your Macintosh is running under System 7, you'll still be able to see the Mosaic folder window, and perhaps other windows on the screen in the background. If you'd like to temporarily hide the other windows to reduce clutter on the screen, choose Hide Others from the Application menu at the far right of the menu bar:

Figure 5-2: Hiding all other windows. To access the Application menu shown above, click the Mosaic icon at the far right of the menu bar.

By now, here's what you should see. Don't worry if the symbol palettes aren't positioned exactly as they are shown below. Later, you'll learn how to open, close, and position them any way you wish.
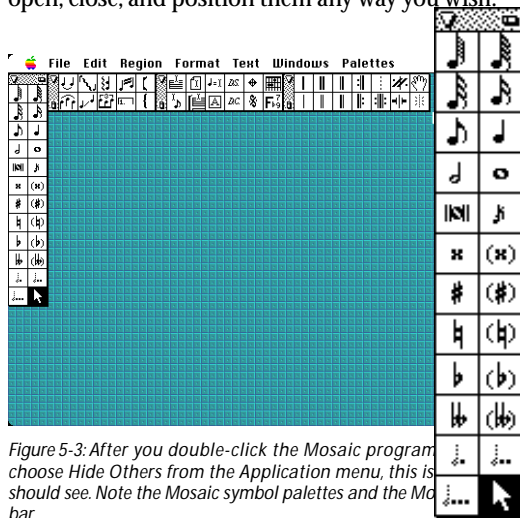

Figure 5-3: After you double-click the Mosaic program, choose Hide Others from the Application menu, this is should see. Note the Mosaic symbol palettes and the Mo bar.

Working with the cursor

Depending on what you are doing, the arrow cursor will change shape to aid you with a particular task. For example, later on you may notice that the arrow cursor temporarily changes into a spinning clock while Mosaic takes time to accomplish something that you have asked it to do. The spinning clock gives you an indication that Mosaic is busy and that further actions with the mouse will be postponed temporarily while Mosaic finishes what it is doing. (By the way, on fast Macintosh computers, the time you wait for the clock cursor is much shorter.)

The arrow cursor can switch to other cursors as well, depending on what you are doing. Most of them are familiar Macintosh cursors. Here are some examples:

| Arrow cursor | Text cursor | Line break hand tool | General symbol entry cursor | Staff cursor |

Figure 5-4: Some of the cursors you'll see in Mosaic.

Getting back the arrow cursor

At this point in the tutorial, the cursor is the standard arrow. Most of the time, it should remain an arrow, unless we change it for a specific task in the tutorial (such as when we insert a musical symbol or some text).

If you accidentally switch the cursor to something other than the arrow, you can always get back the arrow right away. There are two ways to do so:

■ Press command-period

OR

■ Click the arrow icon in the Notes palette (The Notes Palette will be explained in just a moment.)

If Mosaic starts giving you unexpected results when you click, get back the arrow cursor and try again.

As you get to know Mosaic, you'll use this technique all the time, without even thinking about it.

Getting familiar with palettes

Palettes are the floating panels filled with symbols that you see at the top and to the left of the screen. (See Figure 5-6 on page 28.)

☞ If you don't see any palettes on your screen, don't worry. You can open each palette by choosing its name from the Palettes menu.

Mosaic provides hundreds of musical symbols, which are grouped by musical meaning into eleven palettes to conserve screen space. You can close and open any palette at any time. You can arrange them on the screen in any way you wish, and Mosaic will remember their position, even after you close them.

For practice, choose Dynamics from the Palettes menu to open the Dynamics palette, and then try the techniques below. If your palettes are arranged differently than Figure 5-6 on page 28, use the techniques below to match Figure 5-6. This will make the tutorial easier to follow. When you are done, close the Dynamics palette. Leave open the Notes, Groupings, Text, and Barlines palettes.
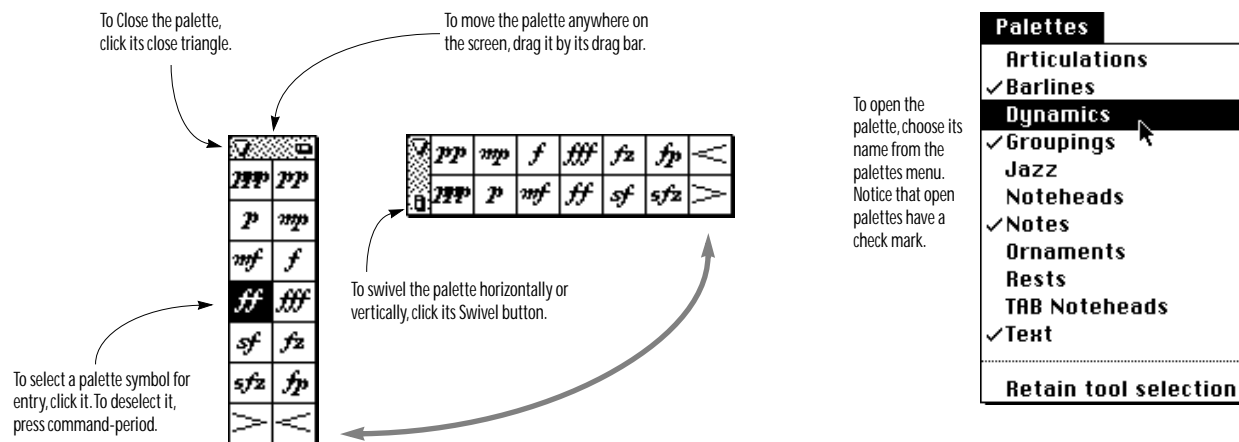
To Close the palette, click its close triangle.

To move the palette anywhere on the screen, drag it by its drag bar.

To open the palette, choose its name from the palettes menu. Notice that open palettes have a check mark.

To swivel the palette horizontally or vertically, click its Swivel button.

To select a palette symbol for entry, click it. To deselect it, press command-period.

Figure 5-5: Working with palettes.

Opening the lead sheet example file
Now let's open the lead sheet example file:

1 Choose Open from the File menu.

The standard Macintosh open dialog box appears.
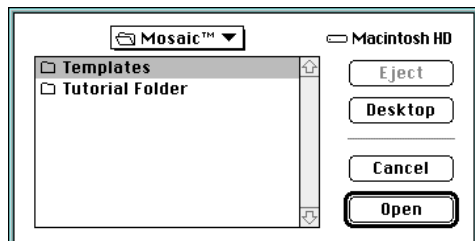
2 Locate the Tutorial Folder and open it.

The Tutorial Folder is located in the Mosaic Folder. Most likely, it is already showing in the list on the screen. If not, use the Directory pop-up menu above the scrolling list and the Open button to the right of it to navigate to the Mosaic Folder.

3 Open the file called *Lead Sheet Example* by double-clicking its name or by clicking its name and then clicking the Open button.
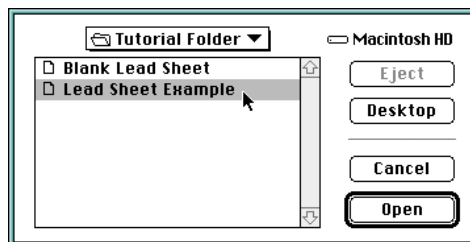
☞ Notice that the arrow cursor turns into a spinning clock while the file is opening. This spinning clock cursor will appear whenever Mosaic takes a moment to complete a task.

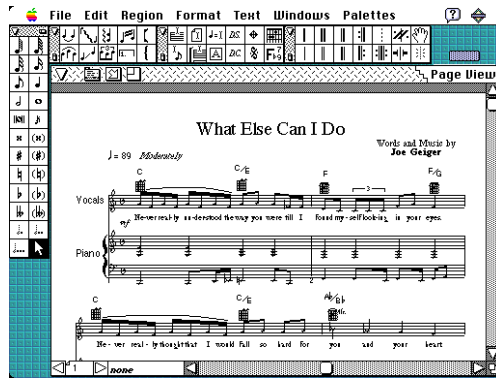**4** You should now see a window on the screen containing music.

Figure 5-6: Opening the lead sheet example file.

Fitting the window to the size of your computer screen

If the window of music you now see on the screen fills the entire screen, you won't need to do this step. If your computer screen is large enough to open the window wider and/or taller, click the Zoom box in the title bar. Mosaic will increase the size of the window so that it displays as much of the page as possible on your screen.
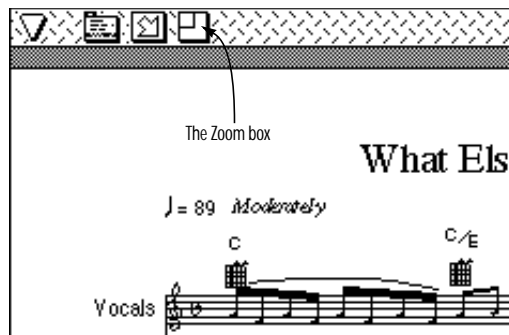

The Zoom box

What Els

♩= 89 *Moderately*

C   C/E

Vocals

Figure 5-7: Clicking the zoom box to display as much music as possible. The zoom box is on the left side of the title bar of the window.

Zooming the display in and out

The window you are looking at is called a *page view.* It displays the music on a page exactly as it will print out. Mosaic allows you "zoom" the display out so you can see the entire page on your computer screen. You can also zoom in to focus on a particular area.

Mosaic provides 14 zoom levels, from 20% to 800%. 100% represents actual size (the size on the screen matches the size at which the page will print). Let's zoom in on the first measure:

1 Position the arrow cursor directly on top of the first measure in the top staff, but don't click or press. Just position the arrow on top of the staff.

This tells Mosaic to center the first measure in the window as you zoom in.

2 Press command-left-bracket ([ ).

The display gets 20% larger. command-left-bracket zooms in; command-right-bracket zooms out. A little later, you'll see how to zoom more quickly.

Now, let's really zoom in much further––five more levels. Here's how to do it quickly:

1 Position the arrow cursor directly on top of the first measure again.

Like before, don't click or press the mouse at this time. Just position the arrow on top of the measure.

2 Hold down the command key, and while holding it down, press the left-bracket key five times rapidly.

This causes Mosaic to jump directly to the last zoom level, without stopping at each one in-between.
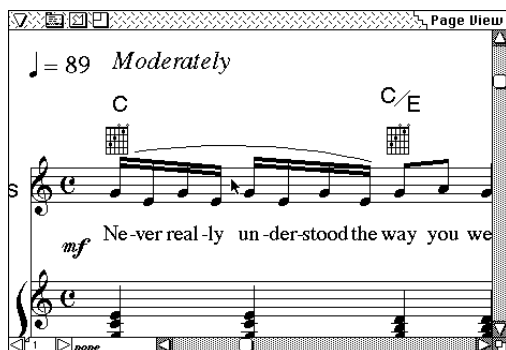
Figure 5-8: Zooming in 200% on the first measure.

Scrolling the display

If you don't see the first measure as shown in Figure 5-8 above, you might need to scroll the display up, down, left or right. Use the window's scroll arrows and scroll bars in the standard fashion.

Selecting a note

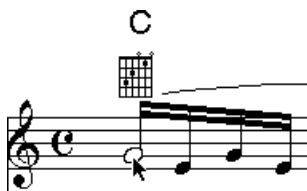Click the first note in the measure. This selects the note.

Figure 5-9: Selecting a note.

☞ If the note does not become hollow as shown in Figure 5-9 on page 29 when you click it, and you see lines appear above and below the staff instead, the window has somehow been placed in *Show layout* mode (explained later). If so, just press command-L to switch out of Show Layout Mode, and then try clicking the note again.

The current voice box

Notice that when you select the note, the *current voice box* in the lower left-hand corner of the window to the left of the scroll bar displays what *voice* the note is in. In this example, the note is in a voice called *Vocal*. In Mosaic, a voice consists of an entire line of notes and/or rests, and it is displayed on a staff. Each staff contains at least once voice, and the notes on the staff reside within the voice. Staves can even display several voices at once. You'll learn more about this later, so don't worry if it seems a little confusing. The way that Mosaic handles voices and staves makes it very powerful and flexible.
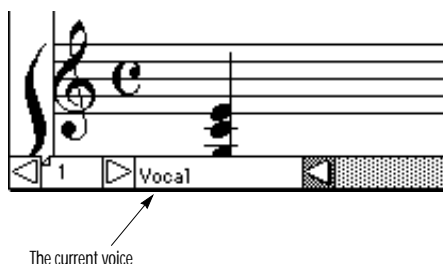
The current voice

The current voice box is also a pop-up menu that displays all of the voices in this piece of music. Press on the box to see the pop-up menu.

Figure 5-10: Using the current voice pop-up menu.

In this piece, there are three voices: *Piano L/Bass, Piano R*, and *Vocal*. The current voice box always tells you what voice you are working with. You'll use it a lot in Mosaic.

Now click a note on the second staff (the treble staff of the piano part). Notice that the current voice box switches to the *Piano R* voice.

Dragging notes and other symbols

Mosaic lets you move musical symbols simply by dragging them. Let's try it now.

1 Drag the first note in the top staff, the G, down a few lines.

Notice that the beam and slur follow the note. In general, Mosaic doesn't treat musical symbols as mere graphic symbols. It treats them with musical meaning. You save time because Mosaic makes things look musically correct for you.
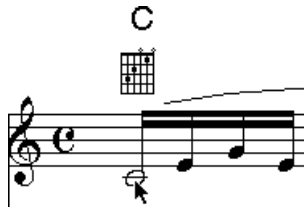
2 Now drag the second note in the measure to the right.

Notes can be dragged up and down to change their pitch, and left and right to adjust their spacing.
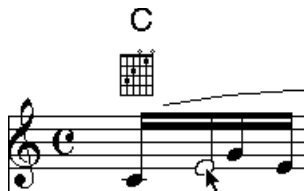
3 Now click directly on the slur above the sixteenth notes to select it.

Because the slur is so thin, you may need to try to click it more than once. You'll know when you've successfully selected it because four handles appear as shown below.

Figure 5-11: Selecting a slur.

4 Reshape the slur by dragging it upwards from the middle.

Figure 5-12: Reshaping a slur.

5 Click the slur again to select a second time, and then reshape it some more by dragging one of the two handle above it.

Figure 5-13: Adjusting a slur by dragging one of its handles.

6 Now drag the beam of the second group of sixteenth notes upwards.

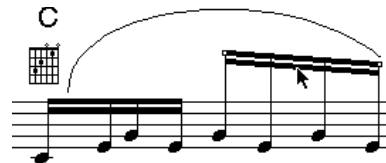Just grab the beam and drag upwards.

Figure 5-14: Adjusting the height of a beam.

7 Adjust the angle of the beam by dragging the left handle as shown.

Figure 5-15: Adjusting the angle of a beam.

Peace of mind with unlimited Undo & Redo

Now it's time to learn about one of Mosaic's most powerful and unique features: *unlimited Undo*. Mosaic, just like most Macintosh programs, allows you to undo––take back––the last action you made.

The last thing we did was to adjust the beam angle. But it doesn't look very good, so let's undo it. Choose *Undo Adjust Beam* from the Edit menu in the menu bar at the top of the screen as shown in Figure 5-16 on page 31.

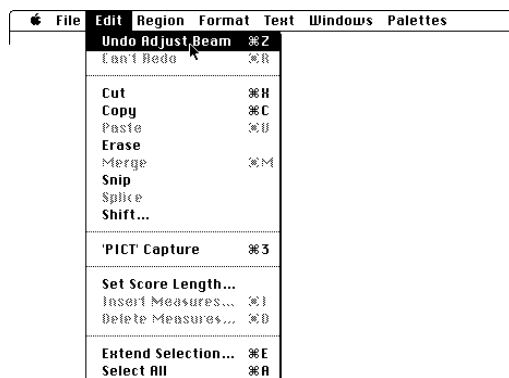Notice that the beam snaps back to its original position.

Figure 5-16: Using the Undo command.

You don't have to stop after undoing just once, however. Mosaic remembers everything you do from the time you first open a file (last saved the file)! Let's now undo all the changes we've made. Here's a shortcut for using the Undo command:

1 Press command-Z.

This is the standard Macintosh command key shortcut for the Undo command. Just about every program that has an Undo command uses command-Z.

2 Keep pressing command-Z until measure one is back to its original state.

Don't worry about undoing too many times. If there is nothing left to Undo, the menu command becomes greyed out and pressing command-Z does nothing. If you are not sure whether you have undone everything, check the menu. If the command is grey, you are done.

As if Undo weren't enough, you can once again change your mind and Redo everything. That's right. We can restore all of the changes we made using the Redo command in the Edit menu.

The shortcut for Redo is command-R. Try pressing command-R several times in a row to redo the adjustments. Redo is unlimited, just like Undo. You can use these two commands to freely move backwards and forwards through any series of actions you take in Mosaic. Talk about flexibility! Feel free to play around with Undo and Redo commands as much as you like. They're kind of fun, aren't they?

Getting familiar with Mosaic's mini-menus

Mosaic has another unique feature called the *mini-menu*. It is a small menu located in the title bar of each window, and it provides commands that are specific to that window.

The mini-menu in the page view window has several commands, as well as a list of all the available zoom settings. Currently, we are zoomed in to 200%. Let's zoom out to 60% so we can see the entire page. Choose 60% from the mini-menu as shown in Figure 5-17.
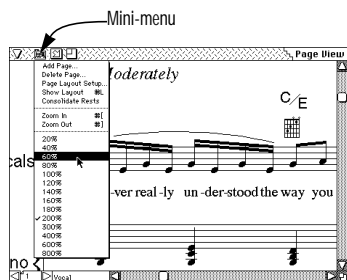
Mini-menu

Figure 5-17: Using the mini-menu to zoom out to 60%.

Using the zoom box to adjust the window

After you zoom out, the full page appears in the window, but it may be partially obscured. To quickly adjust the window to show as much of the page as possible, click the zoom box again. If you have a smaller computer screen, you can see more of the page by zooming out to 40% or even 20%, although it becomes more difficult to make fine adjustments at these levels.
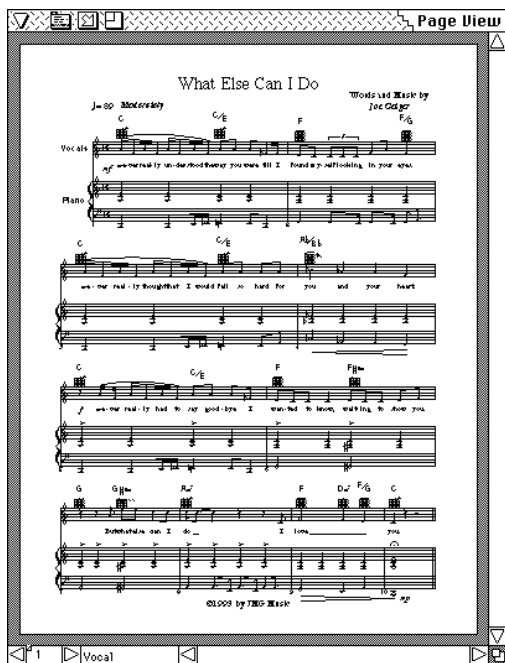

Figure 5-18: Zooming the page view to 60%. If your computer screen is large enough, you may be able to see the entire page. If not, the bottom of the page may still be below the edge of the window.
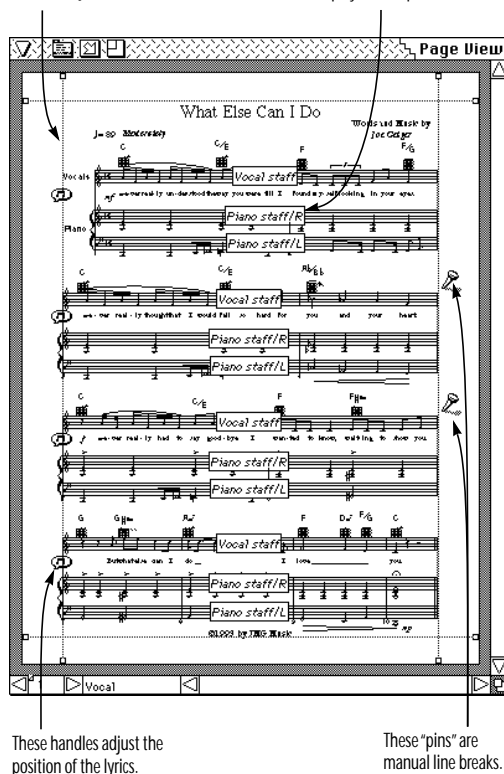
Using Show Layout mode to adjust the page layout

Mosaic's page layout features give you complete control over the placement, spacing, size, indentation, and arrangement of the staves on the page. Best of all, you can make changes directly on the page.

To make adjustments to the page layout, we need to activate Show Layout mode in the view's mini-menu. To do so, select Show Layout from the mini-menu. The command in the menu changes to Hide Layout, and margins appear on the page, along with staff names and the layout-related icons shown below.

Draggable margins appear in Show Layout mode.

In show Layout Mode, staff names are displayed on top of each staff.

These handles adjust the position of the lyrics.

These "pins" are manual line breaks.

Figure 5-19: Show Layout mode provides page layout features such as draggable margins.

☛ Notes and other symbols can't be edited in Show Layout mode.

Adjusting the page margins

To adjust the page margins, drag them. Try dragging the left and right margins towards the middle of the page to increase them a little bit.

1 Drag the left margin about a quarter of an inch to the right.

Notice that the left edge of each staff moves with the margin, and all the music adjusts automatically to the new margin.

2 Drag the right margin about the same distance to the left.

Increasing the spacing between the staves

Let's increase the spacing between the staves on the page. First, we need to make some room at the top of the page by deleting the title and other text there.

1 Click anywhere on the text, "What Else Can I Do" to select the text box.

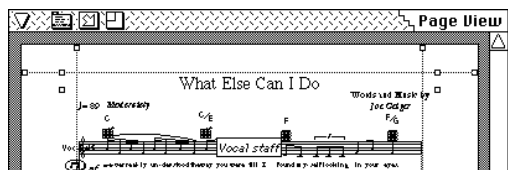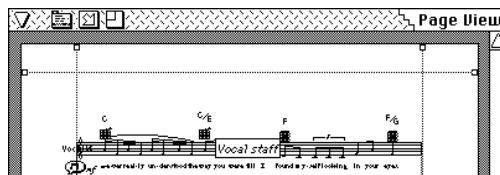When the text box is selected, four handles appear around it.

Figure 5-20: Deleting the title and other text..

2 Press the delete key to remove the text.

3 Do the same for the text, "Words and music…" on the right side and the tempo markings on the left.

Now the top of the page is blank.

4 Drag the top staff to the top of the page.

To do so, press anywhere on the staff and drag upwards. When you are done, the staff will be all by itself at the top of the page. Notice that the top staff also has a box around it, which indicates that it is selected.
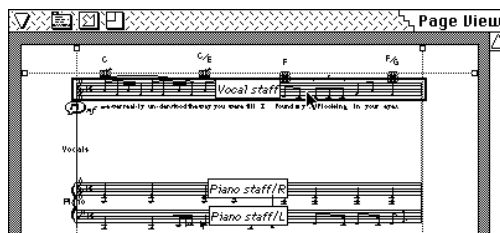

Figure 5-21: Dragging a staff.

Restoring even staff spacing

What do we do about the gap below the top staff? Fortunately, Mosaic can automatically restore even staff spacing after you adjust the location of the staves.
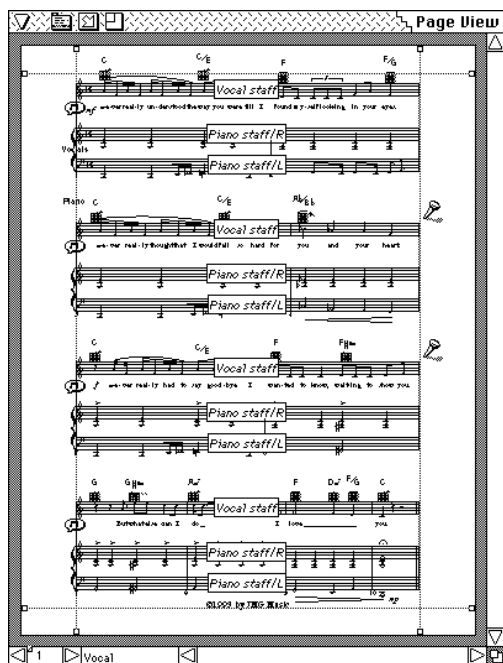
To restore even staff spacing:

1 Choose Select All from the Edit menu in the menu bar at the top of screen.

All of the staves become selected.

2 Choose Realign from the Format menu.

The staves become evenly spaced. (The same thing can be accomplished by selecting only the top staff and bottom staff using the Macintosh standard method of option-clicking.)

Indenting the first staff system

You'll learn a lot more about page layout later on. For now, let's leave Show Layout mode and indent the first staff system.

1 Press command-L.

Pressing command-L is a shortcut for toggling the Show/Hide Layout command in the mini-menu. After doing so, the margins, staff names, line break pins, and lyric handles disappear to indicate that Layout Mode is no longer in effect.

2 Grab the barline that constitutes the left edge of the first staff system and drag it to the right about a half an inch.
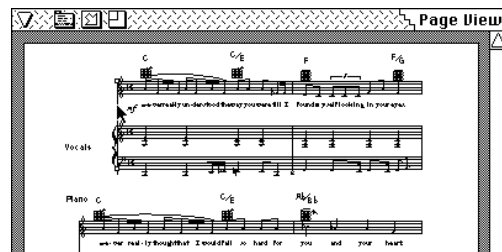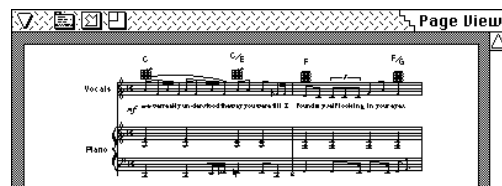

Figure 5-22: Indenting the top staff system.

3 Grab the word "Vocals" and drag it next to the vocal staff.

If necessary, you can zoom in to fine-tune the position of the text with respect to the staff.

4 Grab the word "Piano" and drag it next to the piano staff.

The top staff system should now appear as shown below.


Summary

So far, you've already become familiar with the following important, "bread-and-butter" features in Mosaic:

- The cursor
- The symbol palettes
- The Page View window
- The Current voice box
- Zooming in and out
- Unlimited Undo/Redo
- Mini-menus

- Show Layout mode

- Adjusting margins and staff spacing

Understanding voices, staves, and views

Before you begin to build your own lead sheet, let's take a look at the Voices window, Staves window, and Views window. These windows contain the building blocks––the underlying structure––of every Mosaic score. Looking at them now will help you understand how to create your own music. These windows provide a great deal of power and flexibility in the way you structure your scores.

1   Close the page view by clicking the close button at the far left of its title bar.

Close button
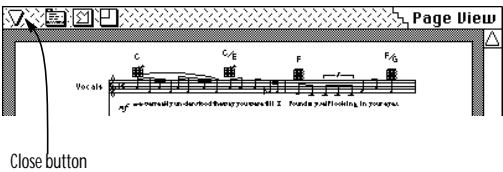
2   Choose Voices from the Windows menu.

The Voices window appears. It displays each voice that has been created for the score. In this case, there is a voice for the vocal part, the left- and right-hand piano, and a few percussion voices. These are the same voices that appeared in the current voice pop-up menu earlier. You can create as many voices as you like in a Mosaic score. Once you create them, you assign them to a staff in the Staves window.
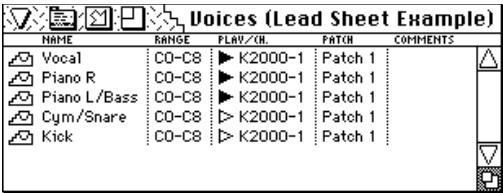

Figure 5-23: The Voices window.

☞ In the example above, each voice is assigned to a Kurzweil K2000 MIDI synthesizer for MIDI playback. Obviously, the playback assignment you see may be different because you may have different MIDI devices. The same goes for the "Patch" column. These features are covered later in the tutorial.

3   Choose Staves from the Windows menu.

This example file contains four staves. So far, we've been working with the vocal staff and piano staves, which were displayed in the page view we worked in earlier. Notice that the Drum staff has two voices assigned to it. (If you don't see any voices at all, choose *Show Voices* from the mini-menu.) Both voices appear on this staff. Later on, you'll learn how to create voices and staves, and assign the voices to the staves.
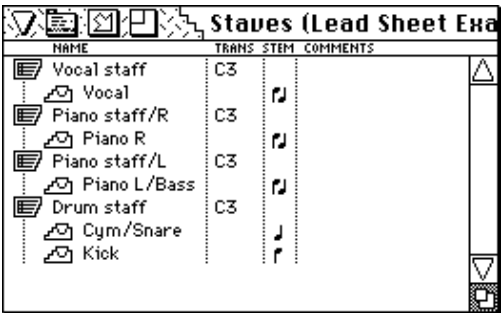

Figure 5-24: The Staves window.

4   Choose Views from the Windows menu.

The Views window contains a list of all the views in the file. A view is a window that display staves. We were working in a page view for most of this tutorial. A page view can contain any sized page, and the page can contain any number of staves (as many as will fit) in any order. Later on, you'll learn how to create views and place staves in them. In this example file, there are only two views: a *page* view and a *galley* view. As described earlier, a page view displays the music on a page exactly as it will print out. A *galley* view displays the staves in a

window that scrolls endlessly to the right. Galley views are useful for editing and for getting a bird's eye view of the score. Galley views are great for entering notes, slurs, ties, dynamics, and other musical symbols. You can then display the music you've entered in a page view and touch it up, place text, set the desired note spacing and line breaks, and other final formatting tasks.
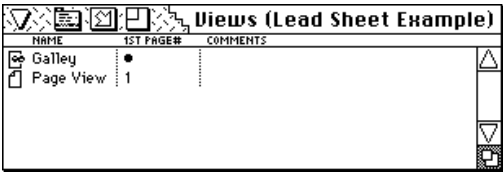
5 To take a quick peak at the galley view, double-click the "infinity" icon to the left of its name in the list.

The Galley view window appears as shown in Figure 5-25 on page 36. It contains all four staves, including the drum staff.

You can create as many views as you want. Each view can display any combination of staves that you want. For example, you might have a "score" view that contains all staves. In addition, you might have a separate view for each staff by itself to serve as an individual instrument part.

You can even display the same staff in several views at once. For example, the staff might be in both a score view and an instrument part view at the same time. Changes to the staff made in one view will automatically be updated in the other. You'll learn more about this later on.
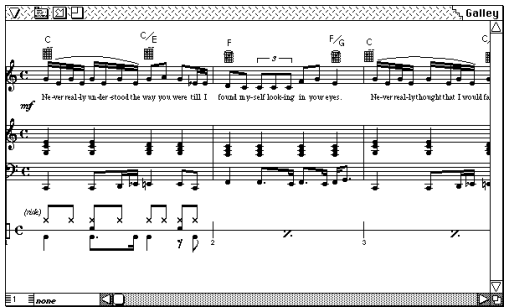

Figure 5-25: The galley view.

Looking at the Lyrics window

Now let's take a look at how the lyrics were typed in. Mosaic has a very intuitive method for entering lyrics.

1 Choose Lyrics from Windows menu.

The Lyrics window appears. It displays a list of all the lyrics in the file. A *lyric* is any body of text of any length that you would like to align with notes below a staff. In this file, there is only one lyric.
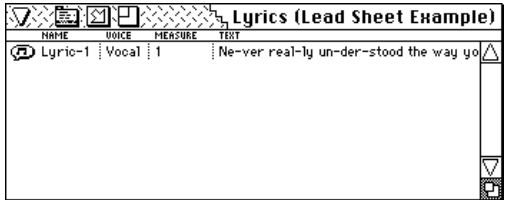

Figure 5-26: The Lyrics window.

2 Press on the word "Vocal" to observe the voice pop-up menu (but keep "Vocal" selected in the menu).

You can use this pop-up menu to assign the lyric to any voice in the piece. Mosaic then automatically displays the lyric text below the voice on its staff.

Figure 5-27: The Voice assignment pop-up menu.

3 Let go of the pop-up menu, but keep "Vocal" as the selection when you do.

4 Double-click the lyric icon just to the left of the name "Lyric-1".

The lyric text entry window appears. In this window, you type in lyrics, just like you would in any standard Macintosh text program. In fact, you can type the lyrics in your favorite word processing software (MacWrite, Word, WriteNow, etc.) and then paste the text into this window. Regardless of how you enter the text, Mosaic can then automatically line up each syllable and word with the notes in the voice, automatically skipping rests. All you really have to do is enter the lyrics and decide where the syllable breaks are. What a time saver! Syllables, by the way, are indicated with either a space or a dash. You can also change the text font, style, and size in this window.
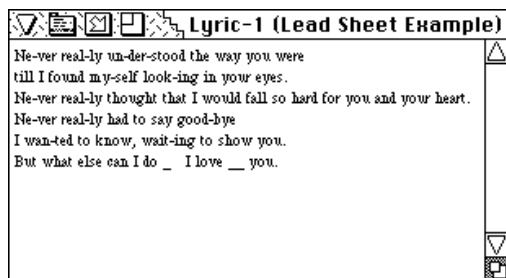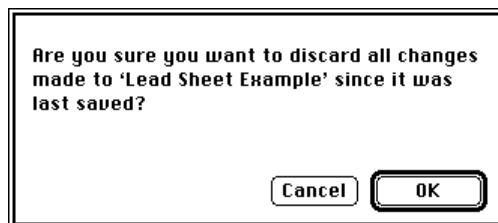

Figure 5-28: The Lyric text entry window.

Printing the lead sheet example

Now let's print the lead sheet example. Having a printed copy of it will be especially useful for the rest of the tutorial chapters. First, let's restore the file to its original state so we can get an unmodified copy:

1 Choose Revert from the File menu.

A dialog box appears.

2 Click OK.

Mosaic discards all the changes we have made to the file and reopens the file from disk.

From here, you can print the page view in the same fashion as you would with any Macintosh program:

1 Open the Chooser from the Apple menu and select the desired printer.

2 Close the Chooser.

3 Back in Mosaic, make sure that the page view window is active.

The page view window is active when it is the front-most window (not including the palettes). If it's title bar is filled in, then it is the front-most window. If the title bar is blank, click it to make it active.

4 Choose Print from the File menu in Mosaic.

5 If necessary, make any adjustments to the Print dialog box options.

The options you see depend on what type of printer you have and what version of the printer driver and System software your Macintosh is running.

6 Click Print.

Playing the lead sheet on a MIDI instrument

You can easily play the lead sheet score on a MIDI instrument if you have made the preparations for MIDI playback and recording as outlined in chapter 4, "Preparing for MIDI Recording and Playback". If you haven't, or if you are not planning to use Mosaic's MIDI capabilities, skip this section and proceed to "Quitting Mosaic" on page 40.

To play the lead sheet:

1 Open the Voices window by choosing it from the Windows menu.

Each voice has a MIDI play-enable button, as well as a MIDI playback destination and patch. Notice that the vocal and piano voices are already play-enabled (their button is black), and the drum voices are unplay-enabled (muted).

☞ The playback destination displayed on your screen is probably different than what is shown below in Figure 5-29 because you probably have different MIDI instruments than the ones used in this example.
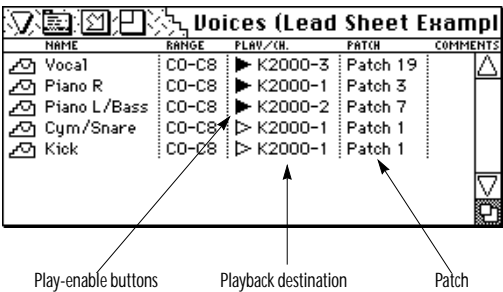

Play-enable buttons   Playback destination   Patch

Figure 5-29: Preparing for MIDI playback.

2 Leave the drum voices muted as shown above.

3 Choose the desired MIDI playback destination for the Vocal voice from the "Play/Ch" column pop-up menu to the right.

To do so, press on the current assignment to open a pop-up menu. In Figure 5-29 above, you would press on the word "K2000-3" to the right of the Vocal voice. On your screen, press whatever name appears in that position. The resulting pop-up menu displays the MIDI device(s) in your studio, similar to what is shown below in Figure 5-30. Each device also has a sub-menu of MIDI channels available on the instrument. In this example, the Kurzweil K2000 channel 3 is being selected.

☞ If you only have one MIDI device, the pop-up menu will have only one device in it, so it may not look like the pop-up list shown in the example. Similarly, if a device has only one MIDI receive channel available, no sub-menu appears for that device.
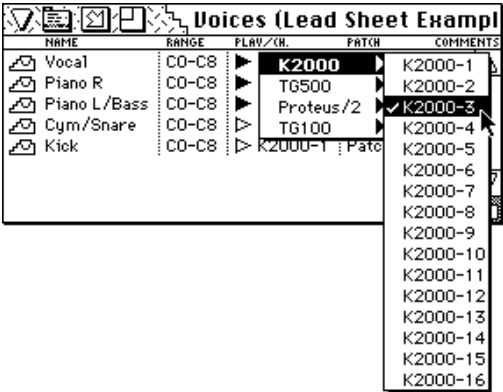

*Figure 5-30: Selecting a playback destination for each voice.*

4 In a similar fashion, choose a playback destination for both piano staves.

You can assign the voices all to the same MIDI destination if you like. If you have several different MIDI devices, you can assign the voices to separate devices. Here's a suggestion: assign the vocals to a

MIDI source that has a good solo instrument sound, like trumpet or sax. Assign the piano voices to a synth that has a bright acoustic piano sound.

5 Choose a patch for each device by pressing its current patch assignment to open the pop-up patch list and select the desired sound.

For example, in Figure 5-29 on page 38, you would press on the word "Patch-19" to open the pop-up patch list.
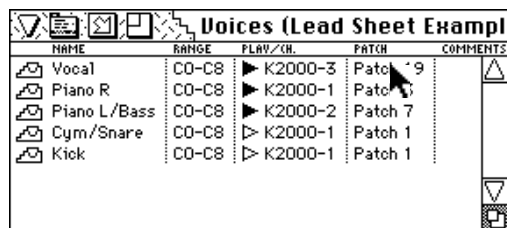
On your screen, press whatever name appears in that position. The resulting pop-up menu displays a list of patches (the MIDI term for *sound*). If you have been using a FreeMIDI-compatible librarian program, such as PatchList Manager, at any time before doing this Mosaic tutorial, you might see a list of names similar to what is shown on the right in Figure 5-31. If not, you will see the list of generic names shown on the left.
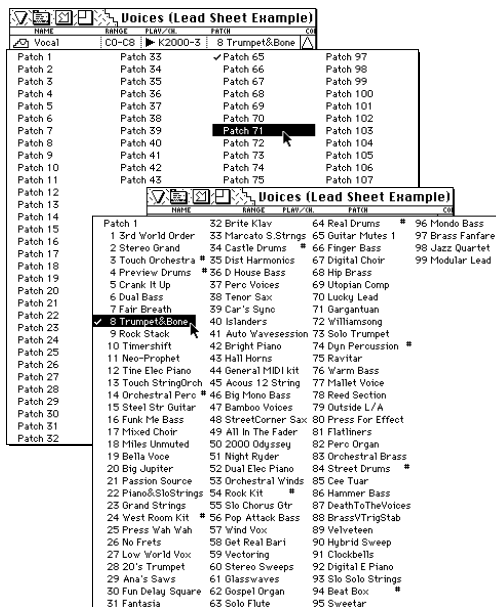

Figure 5-31: Selecting a patch (sound) on your MIDI instrument. A generic patch list is shown on the left, and the patch list for the Kurzweil K2000R synth/sampler is on the right. Any FreeMIDI-compatible patch librarian software can provide patch names as shown on the right. Examples of such software are the PatchList Manager program that is included free of charge with Mosaic, and Unisyn, Mark of the Unicorn's universal editor/librarian software.

If you are choosing sounds from the generic list on the left, you'll have to check your synthesizer to determine what patch number to select in this pop-up menu. For example, if your synth has a *Grand Piano* sound, and it's number is 1, choose *Patch 1* from the pop-up menu.

☞ If you aren't sure about the sounds in your synthesizer, don't go crazy selecting a sound at this point in the tutorial. Just choose Patch-1 for now. On most synths, it is a fairly generic instrument, such as a piano or electric piano.

As you can see, it is much easier to choose sounds by name. If this is important to you, you'll need to learn how to use PatchList Manager or some other FreeMIDI compatible librarian software. See chapter 7, "Using PatchList Manager" (page 83) on page 25 of this book after you complete the tutorials in this book.

Using the transport controls
Now you are ready to begin playing:

1 Open Mosaic's tape-deck style Transport controls by choosing Controls from the Windows menu.

The Transport controls appear. You'll learn more about these controls in the MIDI chapter in the Reference Manual. For now, let's just play back.
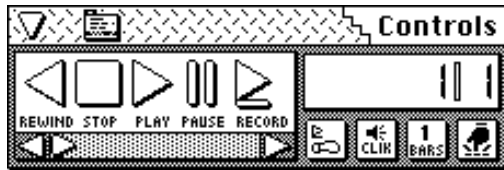

Figure 5-32: Mosaic's transport controls for MIDI playback and recording.

2 Click the play button.

If all goes well, you'll hear your the music play back on your MIDI instrument for about 30 seconds. As it does the counter gives you a running update of the measures and beats as they are played.

If you need to stop playback for some reason before Mosaic reaches the end of the piece, just click the Stop button. Otherwise, Mosaic will stop when it reaches the end of the page.

To play it again, press Rewind and then Play.

If you don't like the instruments being used, click stop and change the patch as described earlier.

If you hear bad notes, check the Voices window to make sure that the drum voices are muted as shown in Figure 5-29 on page 38.

If you don't hear anything at all, make sure the synthesizer volume is turned up and check all of your MIDI and audio connections. (Is the volume up on your mixer?) If you still don't hear anything, don't worry. You'll need to review chapter 4,
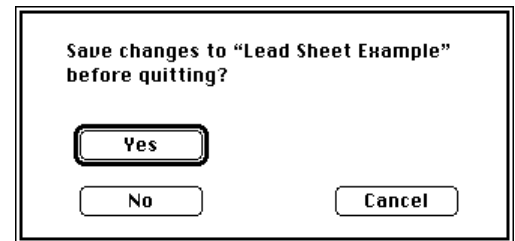
"Preparing for MIDI Recording and Playback" in this book. You can do so when you finish this tutorial.

Quitting Mosaic
Congratulations! You are well on your way to mastering the art of notating music with Mosaic. To complete the tutorial, let's quit Mosaic.

1 Choose Quit from the File menu.

A dialog box may appear asking you if you would like to save changes to the file.

2 If you see the above dialog box, click No.