

The Music Studio™



Version 2.0

**For Apple® IIGS
Computers**

Designed and developed by
Audio Light, Inc.

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The Music Studio



Credits

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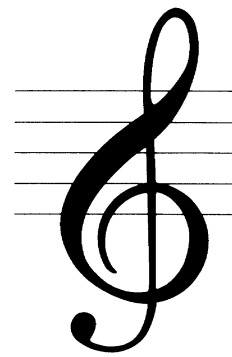
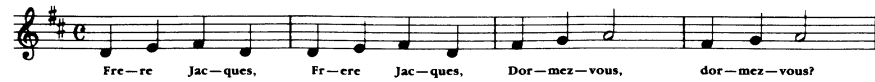
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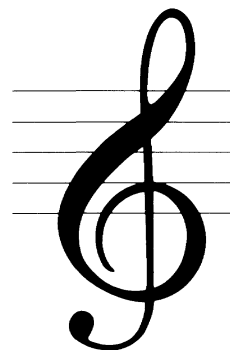
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Reference Section of The Music Studio

You'll find a detailed table of contents for this section starting on page 33.



An Introduction to The Music Studio

Features of The Music Studio

The Music Studio is your fast, fun, and creative way to compose, edit, orchestrate, record, and play music.

Using its powerful tools, you select instrumentation and place notes on the staff to compose a tune. Then, change instruments, alter their sounds, speed up or slow down the tempo, change keys, and play back what you've written—even add lyrics to your work. When you've finished, save it to recall anytime.

The Music Studio offers a number of features for composing and playing back your musical compositions:

- Use standard musical notation: notes, rests, key and time signatures, accidentals, repeats, and more.
- Work with the mouse, using intuitive “point and click” tools.
- Edit musical scores easily: move, repeat, or copy sections of a song, and transpose passages up or down.
- Orchestrate songs using a number of instrument voices.
- Enter notes and chords with a mouse or with real-time recording—directly from your MIDI-equipped instrument.
- Play songs through MIDI-compatible instruments.
- Save and play back your songs at any time.
- Add up to three verses of lyrics to your songs.
- Edit or design instruments with a professional-style waveform editor.
- Multi-track feature lets you isolate parts of a song: harmony, melody, rhythm.

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How to Use This Guide

This guide has two sections:

“A Guided Tour of *The Music Studio*” takes you through all the basic features. It makes stops along the way for you to experiment with the program and get a feel for how it works.

The “Reference Section” covers every aspect of *The Music Studio* not covered in the guided tour. The “Reference Section” is organized by the way things appear on the screen: work area, composition tools, playback tools, and accessory menus are covered in turn.

This manual doesn’t try to teach you about music or composition. But you can learn a lot just by following the guided tour from start to finish.

Before Starting

Make sure you have:

The Program and Additional Songs and Instruments Disks

The Music Studio “Program” disk contains the program. The “Additional Songs and Instruments” disk includes sample songs and sound files containing alternate instrumentation for *The Music Studio*; some of the songs are specifically mixed for the Casio CZ-101, CZ-230S, and HT-700 synthesizers.

A Blank Disk

To save your songs and sound files, you need a blank, formatted disk.

The MIDI Connection

If you’re using a MIDI-compatible instrument with *The Music Studio*, you need a MIDI interface adapter. Follow the interface manufacturer’s instructions for connecting the computer and the instrument.

The Music Studio supports real-time MIDI input with Macintosh™ MIDI interfaces and MIDI output *only* with the Passport® Apple IIGs MIDI card.

Note that you must connect the interface before starting *The Music Studio*; otherwise, the program won’t recognize the MIDI interface.

Introduction



Throughout this manual, the Casio CZ-230S Synthesizer is referred to when discussing MIDI features. Because MIDI is an industry standard, the basic techniques described are the same for any MIDI-equipped instrument.

Using the Mouse

To use the mouse with *The Music Studio* tools, first move it so that the tip of the pointer is on the tool or area of the screen mentioned in the instructions. Then, you can perform one of these actions:

Click—Push and release the mouse button.

Double-click—Quickly push and release the mouse button twice.

Press—Push and hold the mouse button.

Drag—Push and hold, then move the mouse right and left or up and down, depending on the tool you’re pointing to.

A Note on Type Styles

In this guide, **boldface** type is used for words and messages that appear on the screen. Boldface is also used for words you’re supposed to type or keys you’re supposed to press. For example,

Press Return

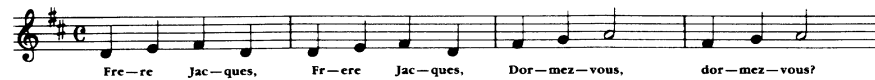
means that you’re to press the key that has the word *Return* printed on it.

A Note to the Adventurousome

If you prefer to explore *The Music Studio* on your own instead of through the guided tour offered in the first six chapters, there’s no reason not to. *The Music Studio* is simple and straightforward and works the way you’d expect it to. And you can always turn to any chapter of the guided tour for details on a specific operation.

For additional help, the “Reference Section” (pages 33-62) explains items on *The Music Studio* tools and menus not covered in the guided tour. The table of contents for the “Reference Section” starts on page 33.

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A Guided Tour of The Music Studio

Chapter 1

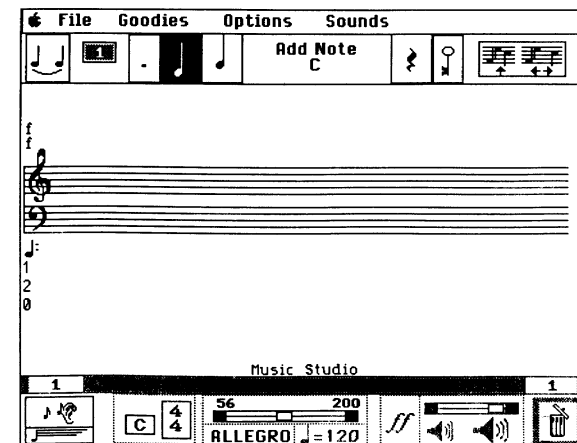
A Look Around *The Music Studio*

Starting The Music Studio

Start *The Music Studio* with the computer switched off.

1. Switch on the monitor.
2. If you want to use your MIDI interface with *The Music Studio*, be sure it is connected.
3. Insert *The Music Studio* "Program" disk in the disk drive.
4. Switch on the computer.
5. To begin working with *The Music Studio*, wait for the theme music to finish, or press the mouse button as it plays.

The Music Studio Screen



The Music Studio screen provides a musical staff where you create songs, and a collection of tools for composing, editing, playing, and saving songs.

The Music Studio



You compose songs in the *work area*. Along the top and bottom borders of the work area are *selectors*—words or symbols that you use to select *The Music Studio's* tools.

The tools themselves are divided into three categories—*composition and editing tools*, *playback tools*, and *accessories*. Most tools are hidden in *menus*—lists of selections that drop down or pop up into the work area when you point to a selector and press the mouse button.

The Work Area

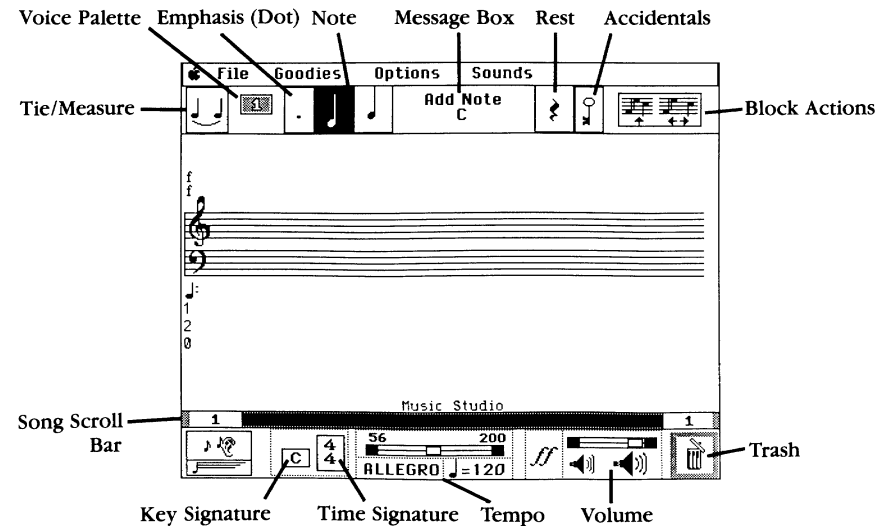
In the middle of the work area is the *grand staff*, made of the *upper staff* (treble clef) and the *lower staff* (bass clef).

To create a song, select a *note duration* from the *notes* menu and an instrument from the *voice palette*. Then, place notes by positioning the pointer on the staff and clicking the mouse button.

Note that if you have a Macintosh MIDI interface, you can also place notes on the staff directly from a MIDI-compatible instrument. See Chapter 4, “MIDI Mastery,” for details.

Composition and Editing Tools

The composition and editing tools use standard notation, so they should be readily familiar to anyone with some musical background. If you don't



A Look Around *The Music Studio*



know all of them, just follow along on this tour—most are covered in the next few chapters.

Tie/Measure. Used to connect notes or mark measures.

Voice Palette. Lets you select one of several instrumental voices for the notes of your song.

Emphasis (Dot). Used to dot, accent, or triplet notes.

Note. Provides a menu of notes of any duration, from whole notes to thirty-second notes.

Message Box. Shows the value of the note or rest selected, and describes the tool you're using. As you place notes on the staff, it shows their position.

Rest. Provides a menu of musical pauses of any duration, from whole rests to thirty-second rests.

Accidentals. Lets you select sharps, flats, or naturals.

Block Actions. Affects an entire song or a selected portion: move, copy, repeat, transpose, change instruments, and perform other major changes using the choices from the menu.

Key Signature. Sets the key for your songs.

Time Signature. Sets the time signature for your songs.

Song Scroll Bar. Makes it easy to move back and forth in your song.

Tempo. Sets the tempo, from slow (56) to fast (200).

Volume. Sets the playback volume, from soft (*pp*) to loud (*ff*).

Trash. Click twice to erase a whole song or a highlighted section.

Playback Tools

The playback tools let you hear your composition as you work on it, and let you play it once you've finished.

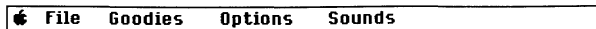
Ear/Flying Note. Play an entire song or a highlighted section. The “flying note” plays your song starting with the notes in the left column on the screen, and scrolls through the notes as it plays.

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Accessories Menu

Across the top of the screen is the accessories menu, offering four selections. Each accessory displays a drop-down window or menu when you point to it and press the mouse button.



Apple. Gives information about *The Music Studio* program.

File. Lets you save and load songs on disk, print a song, use the Jukebox, or leave *The Music Studio*.

Goodies. Used to select the musical Paintbox, design instruments, record with your MIDI-compatible instrument, and more.

Options. Used to turn features on and off: lyrics, MIDI and Apple IIGs voices, measure numbers, multi-track recording, and more.

Sounds. Used to get new voice palette instruments from a disk, and save voices you create on disk.

A Guided Tour of The Music Studio

Chapter 2

Playing and Painting Songs

Play a Sample Song

Before you compose your own songs, you may want to see and hear just how elaborate *The Music Studio*'s compositions can be. Songs on the "Additional Songs and Instruments" disk offer some good examples.

If you have a single disk drive, note that after *The Music Studio* program is loaded and the main screen appears, you may remove the "Program" disk and replace it with the "Additional Songs and Instruments" disk.

1. Make sure to place the "Additional Songs and Instruments" disk into your disk drive (the second drive, if you have two).
2. From *The Music Studio* screen, point to **File** and press the mouse button. The song file menu drops down.
3. Drag the highlight (the black bar) to the first selection, **Open**, and release the button. The **Load Song Files** window opens.

Note: You can also open the **Load Song Files** window by pressing **Command-O**. That is, you can hold down the command or Apple key and type the letter O.

4. Point to the song list. Song files are those with the extension **.SNG**. There are classical pieces, rock, jazz, and country.

The song list doesn't show all the songs on the disk at once. To see more songs, point to the scroll bar on the right edge of the list, then press the mouse button and drag it up or down.

If you have two disk drives, be sure to click **Disk** first to select the second drive.

5. Click the title of a song you want to load: the black highlight bar appears over it.
6. Click **Open**. The watch appears to indicate that the song is loading. After the song loads, the window closes, and the first measures of the song appear in the work area.

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7. To play, click the ear or the flying note. Stop the song at any time by clicking the mouse button.

The Computerized 'Jukebox'

You can play as many songs as you wish in a row by selecting **Jukebox** from the **File** menu.

1. Point to **File** in the accessories menu, then press the mouse button. The song files menu drops down.
2. Drag the pointer to **Jukebox** and release. The Jukebox window opens in the work area.

(Note that if you had been working on a song, a dialog box would appear to ask if you wanted to save your recent changes.)

3. Select a song by pointing to the name in the song list and clicking. **1** appears next to the name to indicate your first selection.
4. To select a song not at the top of the list, drag the scroll bar at the right of the song list.
5. Point to and click the other song titles to add them to your Jukebox play list. A number appears next to each song you select.
6. Click **Play**. The song list begins to play your first selection. It plays through to the last selection, then repeats unless you stop play.
7. To stop, click the mouse button. A dialog box appears with the message:

Stop the music?

Click **OK** to stop Jukebox play, or click **Skip** to jump past the current selection and play the next song. When you click **OK**, the Jukebox window appears on screen again.

8. To return to the main screen, click **Cancel**.

Paint a Song

The music Paintbox gives budding musicians a way to create songs with a musical paintbrush and palette. Paint notes on the staff as colored blocks. Select wider brushes to paint longer notes. Select another color to paint with a different instrument.

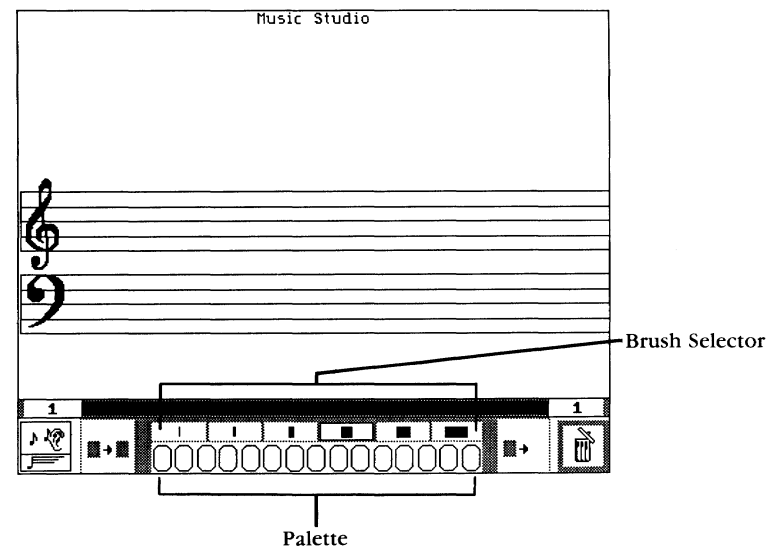
Once you've painted notes on screen, you can play them back using the ear or flying note at the lower left of the screen.

A Look Around *The Music Studio*



1. Point to **Goodies** in the accessories menu. Press the mouse button, drag the pointer to **Paintbox**, and release the mouse button.

The Paintbox work area appears on the screen. It's simpler than *The Music Studio's* regular work area. The grand staff is wider. You have a simpler set of *selectors* to choose from. And instead of notes and voices, you have a *palette* and a set of *brushes*.



2. Move the pointer down the staff. It turns into a grey block—a musical brush that paints the sound of grey (not necessarily a dull sound). As you move the brush down the treble and bass clefs, you hear it play the notes of the scale.
3. Move the brush up and down the staff a few times and listen to the sound.
4. Now, draw with the grey brush: try a set of blocks going up and to the right, beginning at the bottom of the staff. To paint each block, move the brush so that it's on or between the lines of the staff and click.
5. Now, change brushes. Move the pointer to the brush selector and click the medium-large brush.
6. Change musical colors by pointing to the palette and clicking light green.

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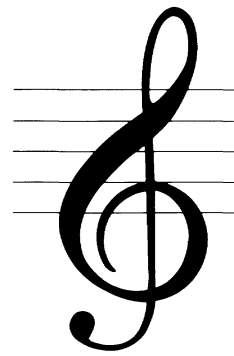


7. Move to the top of the upper staff and begin drawing a descending line. Place each block as you did in the last example. Only this time, place one green block for every two of the grey blocks you drew (the wider block plays twice as long as the narrower block).

When you finish, you should have two lines that criss-cross.

8. To play your musical picture, click the ear or flying note at the lower left of the screen.
9. To leave the Paintbox, point to **Music Studio** at the top of the screen and click.

You'll see the musical picture you've painted displayed in *The Music Studio's* regular work area. The blocks have been transformed into notes—and you've written your first song.



A Guided Tour of The Music Studio

Chapter 3

Compose It Yourself

Now, here's how you write a song from scratch. You won't actually compose your own song this time; instead you'll use an old standby—"Frere Jacques."

Note: Be sure you have your blank, formatted disk on hand before proceeding. You'll need it to save the song you create.

Placing Notes on the Staff

First, make sure the staff is clear. Double-click the trash can to remove any notes or songs from the work area.

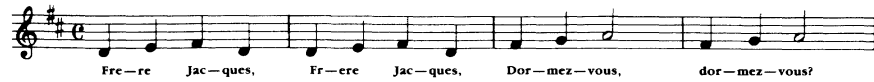
1. Point to the grand staff—the pointer changes to a note. Notes sound as you move up and down the grand staff.



When you first begin *The Music Studio*, the note selected is a quarter note (a solid note with a stem). You can select a new note, with a different time value (*duration*), easily. You'll see how in just a bit.

2. Move the pointer exactly between the two staves in the first column (left side of the work area); the note pointer will have a bar through its middle. This bar is a *leger line*. The note on the leger line between the staves is *middle-C*.
3. Click the mouse button to place the middle-C.
4. Move the note pointer to the right of the first note and up a step. Place it just *below* the bottom line of the upper staff. Click the mouse button to place this D note.

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- Again, move the note pointer to the right of the D and up, positioned on the bottom line of the upper staff. Click again. You've placed an E note.
- Move the note pointer to the right of the E and down two steps, to middle-C again. Click to place the note. The four notes (C, D, E, C) you've placed make up the first four-beat measure of "Frere Jacques."
- Click the ear to play the notes.

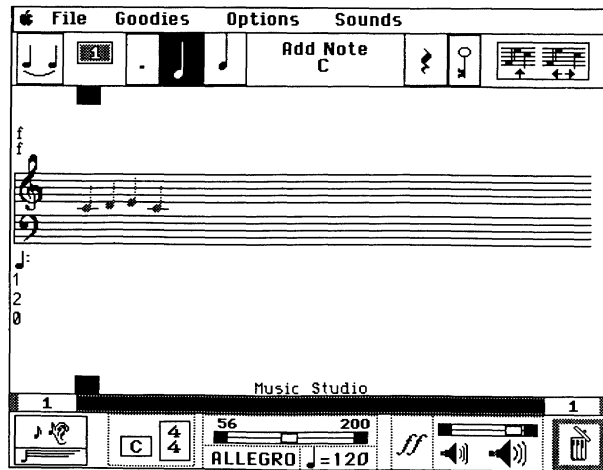
Deleting and Changing Notes

If you accidentally place a wrong note, simply move the note pointer over the note and click—the offender is removed.

Copying Your Work

"Frere Jacques" is made up of four repeating measures—each measure plays twice. *The Music Studio* offers a shortcut that lets you write each measure once, then simply copy it.

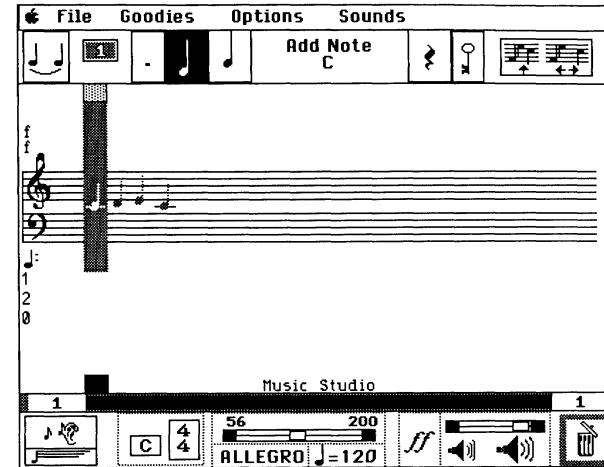
- Point to the bottom of the work area, above the scroll bar and below the first note in your song. Boxes appear at the top and bottom of the work area.



Compose It Yourself



- Click the mouse. A green *block marker* appears in the column.



- Point to the bottom of the work area below the last note in your song. The boxes appear again.
- Click and the block marker expands, covering all four notes of your song.

If you don't get all the notes the first time, just click at the bottom of the work area once to remove the block marker, then repeat the steps.

Block Actions

When you highlight a section of a song, you can perform a block action on it. To copy the measure, you select the **Copy Block** action.

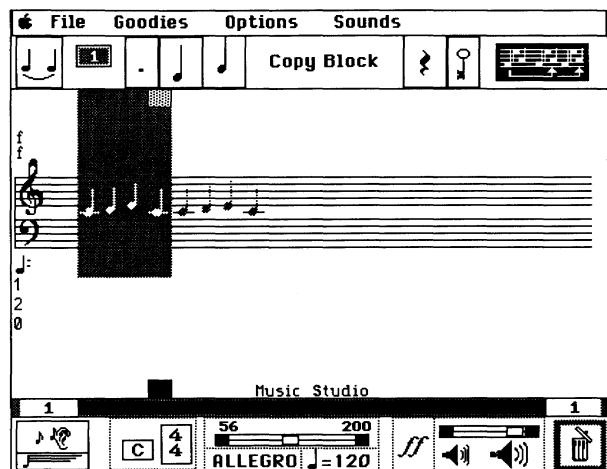
- Point to the block action selector at the upper right of the screen and press. The block actions menu drops down.
- Drag the pointer down the menu. As you highlight each tool in the block actions menu, the name appears in the message box (to the left of the block action selector).
- When you're pointing to **Copy Block**, release the button.



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- Point to the outside right edge of the block marker, then click. The block is copied.
- To remove the block marker, point to the bottom of the work area, above the scroll bar. When the boxes appear at the top and bottom of the work area, click once. The block marker disappears.



- Click the ear to hear the two measures of your song. You can also click the flying note to scroll the notes as the song plays.

Saving Your Work

As you create a song, it's a good idea to save occasionally. That way, you'll always have a backup in case of a mishap, or in case you make a change that you later decide you don't want to keep. (Use the **Revert** selection from the **File** menu to recall the last version of a song you saved.)

Note: If your system has just one disk drive, you need to replace the "Program" disk with the disk where you'll be saving your songs. You may exchange disks any time after *The Music Studio* program is loaded and running.

If your system has two drives, insert the disk for saving your song in the second drive. Step 3 in the following instructions tells you what to do to save your song on the second drive.

- Point to the **File** selector and press the mouse button.

Compose It Yourself



- Drag the pointer to **Save As** and release. The **Save Song Files** window appears, with a list of the songs on the disk you're using.
- If you have two disk drives, click **Drive**. This changes the system to the second drive, where your blank formatted disk should be waiting to store your song.
- The first time you save a file, enter a name for it. Click the **Save As** box at the lower left of the window. A text cursor bar appears.
- Type **FREREJAC.SNG**, then press **Return** to save the file. Note that you need to add the extension **.SNG**.

Note: Once you've saved a song, you can either click **Save** in the **File** menu or type **Control-S** to save it by the same name. Either way, a dialog box appears, asking if you want to replace the song. To do so, click **OK**. To halt without saving, click **No**.

Changing Notes

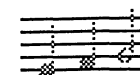
The next two measures of "Frere Jacques" consist of three notes; first, two quarter notes, then a half note. A half note plays twice as long as a quarter note. Like the quarter note, the half note has a stem, but the body of the note is open.



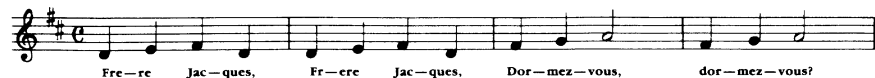
- Click the note selector once to change from **Copy Block** to **Add Note**.
- Place two quarter notes, an E and an F, following the first two measures.

The next note is the half note, so you need to change duration, using the note selector.

- Point to the note selector and press. Drag the pointer to the half note and release. A half note appears in both the note selector and the message box.
- Point to the staff. The note pointer is now a half note. Place a G note immediately after the F note, to complete the measure.



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5. Copy the three-note measure you've just created. Place the block marker on the three notes, then use the **Copy Block** selection to make a copy of the measure just after the original.

Be sure to hide the block marker when you've finished.

6. Try playing your work so far; you've now completed half the song.

Adding Dotted Notes

The next two measures begin with a *dotted* eighth note: the dot indicates a note that plays for one-and-a-half times its normal duration.

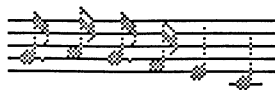
1. Point to the note selector and press the mouse button. Drag the pointer down, highlight the eighth note (the solid note with a single flag), and release the button.



2. Point to the dot selector (just left of the note selector) and click. The note in the message box is dotted, as is the note pointer.
3. Move the pointer to the staff. Place a G note following the last measure. Move the pointer over two spaces and place another dotted G note.
4. Move the pointer to the dot selector and click the dot. The dot is removed from the note in the message box.
5. Using the note selector, pick a sixteenth (double-flagged) note.



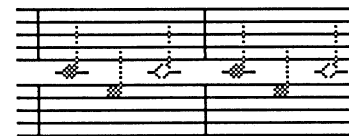
6. Point to the staff between the two G notes you just placed and place an A note. Point past the second G note and place an F.



Compose It Yourself



7. Now, select a quarter note. Point to the staff and place the E and middle-C on the staff.
8. Copy the measure using **Copy Block**.
9. Now, on your own, add the last two measures to the song, like this:



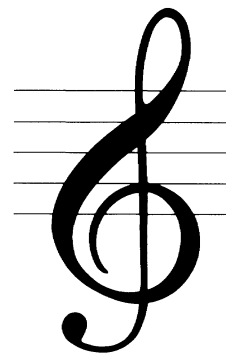
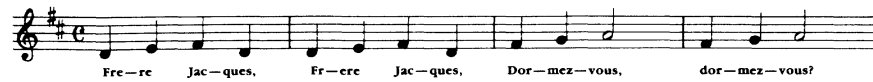
The Scroll Handles

Use the scroll handle at the right of the work area to move past the end of your composition.

- Move the pointer to the right end of the staff. Blue arrows appear at the top and bottom.
- Press the mouse, and the song scrolls to the end.

Once you've completed your song, play it. Then save the file again.

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A Guided Tour of The Music Studio

Chapter 4

MIDI Mastery

Note: In these examples, we refer to the Casio CZ-230S synthesizer. However, MIDI is a standard interface, and most instructions apply to other MIDI-compatible instruments.

Playing a song on your MIDI-compatible instrument is quite simple. You don't even have to write a special part for the MIDI. Any part of a song that would sound good played through the MIDI instrument, can be.

In this example, you'll play "Frere Jacques" on your MIDI instrument.

Note: Before starting, be sure that you connected the MIDI interface to your Apple IIGs *before* you started *The Music Studio*. If not, select **Quit** from the **File** menu, switch off the computer, connect the interface, and start again.

Getting Ready

First, load "Frere Jacques" (if it isn't already in your work area). If you haven't created this song, see Chapter 3, "Compose It Yourself."

Setting MIDI Controls

Now, you need to set two controls to get *The Music Studio* ready: **MIDI Parameters** from the **Goodies** menu, and **Turn IIGs Off** from the **Options** menu.

The **MIDI Parameters** window assigns the MIDI instrument's channels and presets to *The Music Studio*'s voices.

1. Point to **Goodies** and press the mouse button. The **Goodies** menu drops down. Drag the highlight to **MIDI Parameters** and release. The **MIDI Parameters** window appears in the work area.

Midi Parameters gives you four controls over the MIDI-equipped instrument. Each control has several color-coded selections. These correspond to *The Music Studio*'s color-coded voices. By setting the right **MIDI**

The Music Studio



Parameters for a particular color, you can make notes written with that color play through the MIDI instrument.

2. Point to the first (grey) voice setting in the column labeled **MIDI Channel**. Press the mouse button and drag the setting up and down. There are 16 channels available. Set the number to **2** and release the button.
3. Point to the first (grey) voice setting in the column labeled **Preset**. Press the mouse button and drag it to change the setting. The preset values range between 1 and 128. For the CZ-230S, set the number to **24** and release.

Note: *The Music Studio*'s presets have values one greater than the value of Casio CZ-230S presets. For example, when you set *The Music Studio*'s MIDI preset to 24, it selects voice 23—Pipe Organ 2.

4. Point to the first voice setting (again, it's grey) in the column labeled **Range**. Press the mouse button and drag the setting up or down. The numbers roll through the available octave ranges. Set the range to 36-96 (the standard range for the CZ-230S) and release the mouse button.
5. Point to the column labeled **Instrument**, at the setting for the first voice, and click. Type a new name—**P Organ 2**—then press **Return**.
6. Click **Done**.
7. Point to **Options** and press. Highlight **Set IIGs Off** and release the mouse button. Then, click anywhere outside the **Options** menu to continue.

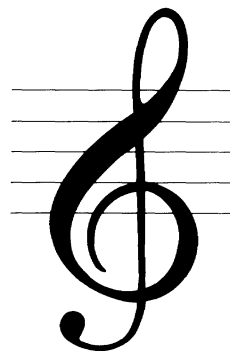
Now that you've set these two controls, you're ready to play the song.

Playing Through MIDI

1. First, make sure your MIDI-compatible instrument is switched on and connected to your computer according to the instructions that came with your MIDI interface adapter.
2. Set the MIDI channel on the MIDI-compatible instrument to 2.
3. Check the volume control on your MIDI instrument, and you're ready to go.
4. Click the ear or flying note to play the song through the MIDI-compatible instrument.

Saving MIDI Parameters

When you save a song or a set of sounds, the **MIDI Parameters** you've selected are saved with them.



A Guided Tour of The Music Studio

Chapter 5

New Voices

The Music Studio lets you use a “waveform editor” to design new voices for the voice palette by adjusting basic sound characteristics. Before you begin working with voice design, here's a little background on the elements of sound.

For a more detailed description of sound theory, a good place to start is *The Science of Musical Sound* by John R. Pierce (Scientific American Library, 1983).

The Elements of Sound

Two major elements contribute to the sound characteristics of an instrument: *volume* and *time*. The two are interrelated, and to analyze an instrument's sound, you need to know how its volume changes over time. For example, the volume of an instrument may tend to stay steady (sustain) over time, or it may trail off (decay).

In the science of sound, a graph tracing the sound of an instrument as it changes volume over time is called the *sound envelope* or *ADSR graph*. ADSR stands for the four stages of the sound envelope: *Attack*, *Decay*, *Sustain*, and *Release*.

Attack is the increase in volume from no sound to sound—the sound of a note when it first begins to play. *Decay* is a slight drop-off in sound volume that occurs in some instruments immediately after the attack. *Sustain* is an even volume level heard after the initial attack and decay. A wind instrument such as a trumpet has sustain as long as you blow into it. Finally, *decay* is the trailing off of the sound as the note ends; decay may be slow or rapid.

Sampled Voices

The Music Studio lets you create a unique voice for every instrument on the musical palette. It also lets you develop and save a limitless number of voice palettes in sound files. You can then use customized instruments with any song you write.

The Music Studio



The basic voices used in the palettes are derived from digitized sample sounds. There are several files of wave banks—sampled sounds—on *The Music Studio* “Additional Songs and Instruments” disk; these files have the extension **.WBK**. Each wave bank contains several sound samples used for the instrument voices in the palette.

You can also read sounds from compatible Apple IIGS music programs into *The Music Studio*.

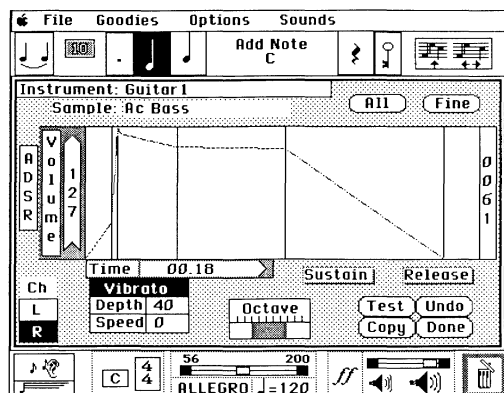
The Design Instrument Window

In *The Music Studio*, you create voices by selecting a sample voice to use, then setting durations and volumes for phases of the sound envelope. You can set as many as six points on the ADSR curve, including a sustain or decay point. Then, you set other characteristics such as octave range, vibrato, and stereo channel.

To create an instrument, use the **Design Instrument** window.

1. Point to **Goodies** and press the mouse button. The **Goodies** menu drops down.
2. Drag the pointer to **Design Instrument** and release. The **Design Instrument** window opens.
3. Move the pointer to the voice palette selector at the top of the screen, then press the mouse button. The instrument menu drops down.
4. Move the pointer to **1** and release the mouse button.

The **Design Instrument** window includes an interactive ADSR graph, or waveform editor, where you can look at and adjust the ADSR characteristics of a sound. The window also includes other tools for adjusting and working with sounds.



New Voices



Instrument. Click **Instrument** to change the instrument’s name, then type a new name.

Sample. Click **Sample** to select a digitized instrument voice to replace the instrument used.

ADSR Graph shows the ADSR characteristics of a sound. Volume can be adjusted at up to six vertical *duration bars* along the graph. The number at the right end of the ADSR graph is the *duration indicator*. It displays the duration (in seconds) of the graph.

Time, at the lower left of the ADSR graph, shows the duration at any place you point to on the graph.

Sustain. Click to turn sustain on, then point to and click the duration bar that you want to represent the sustain level. The sustain duration bar is coded red. To remove sustain, click the **Sustain** button, then click the red duration bar previously selected for sustain.

Release. Click to turn release on, then click the duration bar that you want to represent the beginning of the decay. The release duration bar is coded green. Remove release from the bar by clicking the **Release** button, then clicking the green bar again.

Note that you can have either a Sustain setting or a Release setting, but not both.

Stereo Channels. Click **Ch** to place the instrument on either the left or right stereo channel (if you have a stereo card installed in your Apple IIGS).

Vibrato. Click the **Vibrato** button to turn on vibrato (wavering pitch). Drag the **Depth** and **Speed** controls to adjust vibrato.

Octave. Drag the octave control to adjust the octave range of the sound. Moving to the left shifts the sound down one or more octaves; moving to the right shifts the sound up.

Action. Click the four buttons to **Test** an instrument by playing scales, **Copy** the harmonic volumes from one point on the ADSR graph to another, **Undo** changes made to the instrument, or leave the **Design Instrument** window by clicking **Done**.

Look at and Listen to a Sound

Take a close look at the ADSR curve and other characteristics of *The Music Studio*’s piano sound.

The Music Studio



To see the ADSR graph for the piano, be sure you've selected instrument 1 (**Piano**) from the voice palette selector. Notice that the piano's ADSR graph has a fast attack, a slow decay, and a long release.

To hear the sound of the piano, point to the **Test** selector at the lower right of the **Design Instrument** window and click. A scale begins playing; it plays up and down repeatedly until you click again.

To change the duration of notes played by **Test**, point to the note selector, press the button, drag the pointer to a different note, and release. Then, try **Test** again.

Try Some Other Voices

Now, take a look at and listen to some of the different voices available in your musical palette.

1. Move the pointer to the voice palette at the upper left of the work area.



2. Drag the pointer down the list of instruments. Select **9, Vibes**. This gets the ADSR graph and other settings for the voice.

Notice that the ADSR graph for vibes is more complex than that for the piano. There are other changes, too: the octave setting is higher, vibrato is on, and the duration and speed are set.

3. Point to **Sample** and press. The list of sampled sounds drops down. Drag the highlight down the list to select a different voice sample—**Ac Bass** or **Alto Sax**. Release the mouse button.
4. Try playing the "Vibes" with one of these sampled voices, using the **Test** selector.
5. Click **Undo** to return the sound to its original settings.

Make a Sound

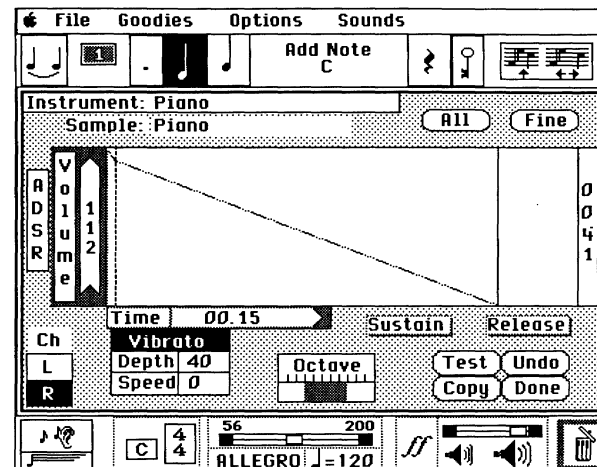
Now, try making some unique instruments by adjusting settings on the ADSR graph.

1. Point to the voice palette selector, then press the mouse button and drag the pointer to **1**. Release the mouse button to recall the "piano" voice.
2. Point to the ADSR graph. The pointer turns to a vertical bar.

New Voices



3. Point to the first duration bar on the ADSR graph (it's all the way against the left side of the chart). Press the mouse button.



Notice the **Time** indicator below the ADSR graph: it changes to show the duration (in seconds) of the sound at the bar you've selected.

4. Drag the bar to the right to stretch the duration. As you stretch it, the rest of the envelope compresses to make room. Notice that the **Time** indicator rolls forward to show the changing duration. Release the mouse button.
5. Click **Test** to hear the effects of the change. The sound should be "fatter," taking longer to come up to full volume.
6. Click **Undo** to set the sound back to its original setting.

Now, try setting a sustain point for the piano sound.

7. Click **Sustain** at the lower right of the ADSR graph. The box is highlighted.
8. Move the pointer to the second duration bar in the graph and click. The duration bar is now red.
9. Point to the note selector, then press the mouse button and drag the pointer to the whole note. Using a whole note makes it easier to hear the effect of the sustain.

The Music Studio



10. Click **Test**. The sound you hear is a piano, but it isn't quite a natural piano sound. That's because it has sustain—it stays at the same level as long as the note is held.
11. Click **Undo** to reset the voice.

Saving Sounds

If you want to keep the changes you make to the voice palette, save them as a sound file. To do so:

1. Make the changes that you want to make to each instrument.
2. Select **Done** to leave the **Design Instrument** window.
3. Point to **Sounds** and press. Drag the pointer to **Save As** and release.
4. The **Save Sound Files** window appears, with a text cursor in the **Save As:** box below the sounds list.

Note: If you have two disk drives, click the **Disk** box to change to the second drive for saving your sound file.

5. Type a name for the sound file (you should include the extension **.SND**) and press **Return**.
6. Click **Done** to hide the **Save Sound Files** window.



A Guided Tour of The Music Studio

Chapter 6

Studio Techniques

In a multi-track recording studio, you can record the instruments in a song on separate tracks. Then, by playing back individual tracks, you hear the instruments individually.

The Music Studio comes equipped with a built-in multi-track recorder. And *The Music Studio* multi-track lets you place any instrument on any track at any time.

This is especially helpful when you want to make changes to a part of a song—melody, bass line, or voices that play through a MIDI-compatible instrument. By assigning these parts to different tracks, you can really hear what's going on with each of them independently.

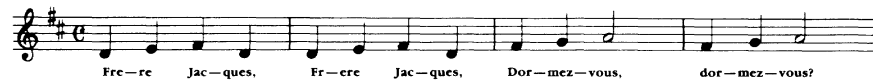
Tracks also offer a way to use block actions on layers of a song. For example, you can copy the rhythm section or the bass line, by turning all the other tracks off and using the **Copy Block** selection from the block actions menu. You can also put one voice of a song in the trash if you need to, without losing the other parts.

Turn on the Tracks

To see how tracks work, let's look a song from the "Additional Songs and Instruments" disk, "Hotrays." This song has some interesting rhythms. You can use tracks to isolate them from the rest of the song and hear them by themselves.

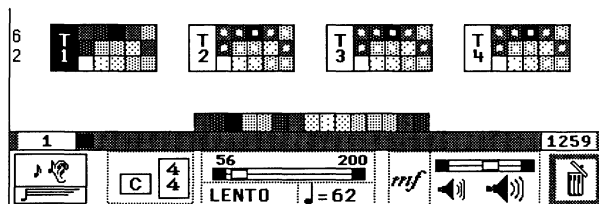
1. Make sure the "Additional Songs and Instruments" disk is in your disk drive. Load the song using **Load Song Files** from the **File** menu.
2. Point to **Options** and press. The **Options** menu drops down.
3. Drag the highlight to **Use Tracks**, then release.

The Music Studio



The four *track controls* appear in the lower portion of the work area. These let you assign any of *The Music Studio's* voices to any of the four available tracks.

The multi-color *voice spectrum* at the bottom of the work area, below the track controls, shows which voices are assigned to an active track. Voices that are switched off are indicated by white blanks in the spectrum.



Notice that track control 1 (T1) is highlighted—it's on. The others (T2-T4) are not highlighted—they are off.

Take a look at the colored *voice selector boxes* next to the track control. These represent the voices in the palette. All voices are assigned to track 1 at first, so the voice selectors for T1 are solid boxes. Other tracks (T2-T4) have no voices assigned to them: their voice selectors are hollow boxes.

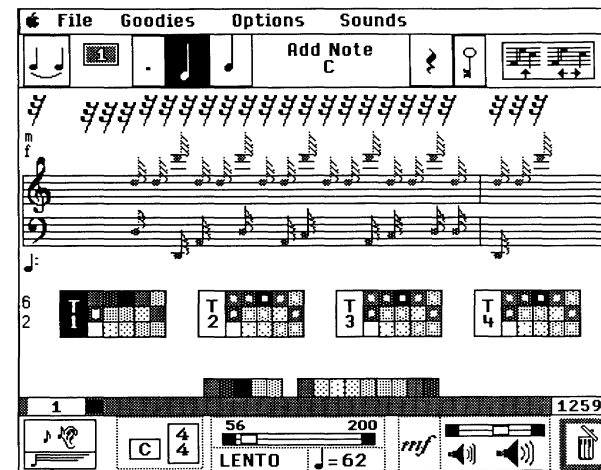
Making Tracks

Now, reassign the voices used in the song to different tracks. Notice that the opening measures of the song "Hotrays" use three voices: a grey bass line, a burgundy harmony line, and a violet melody line. You're going to assign each of these voices to a different track.

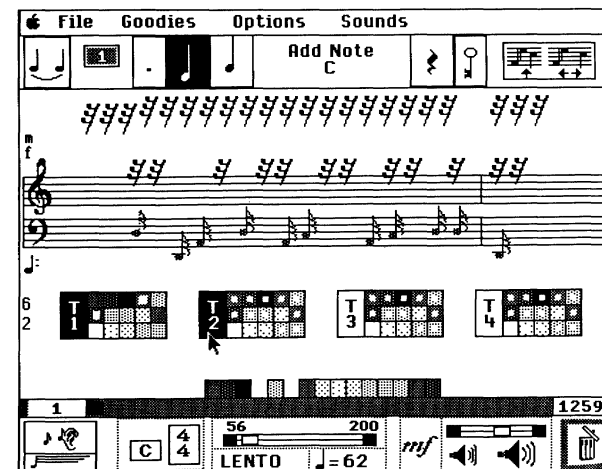
1. Point to T1—the control for track 1.
2. Click the burgundy box that corresponds to the harmony line. The box becomes hollow.

The notes for the harmony disappear from the staff. Notice that the burgundy box for the voice disappears from the voice spectrum below the track controls.

Studio Techniques



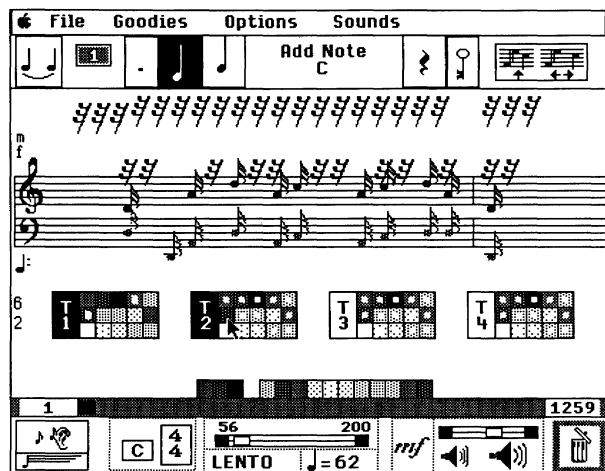
3. Click the violet box corresponding to the melody notes. The box becomes hollow. The notes of the melody disappear from the staff, replaced by rests.
4. Click the flying note to play the song. The two upper voices are silent; you hear just the bass line.
5. Point to T2 (track control 2) and click. This turns on track 2; the control is highlighted.



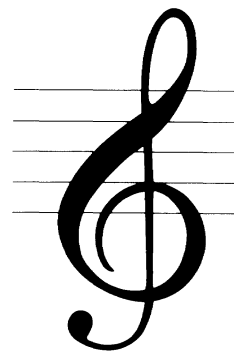
The Music Studio



- Click the T2 selector box for the harmony voice (burgundy). The box is now filled. Notice that the notes for the harmony line appear again on the staff.



- Click the flying note again. Now you see and hear the bass and harmony voices together, without the melody.



Reference Section of The Music Studio

The “Reference Section” is organized by the way things appear on the screen. The work area, composition tools, playback tools, and accessories are illustrated and explained. Menu selections are listed according to the menu they appear on.

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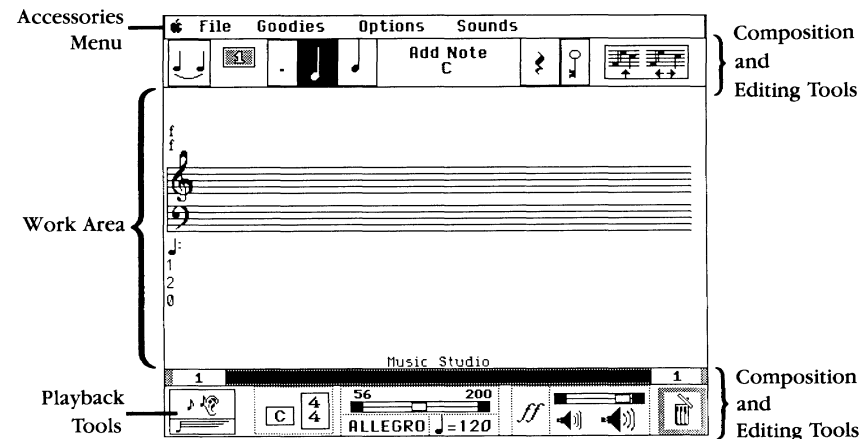


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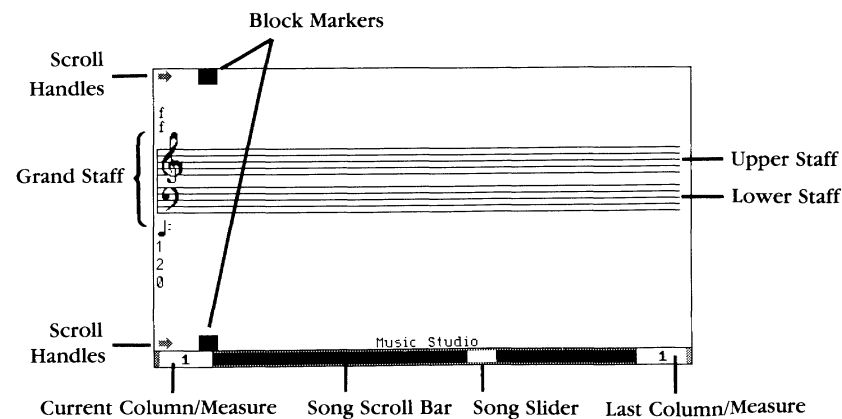


The Music Studio Screen

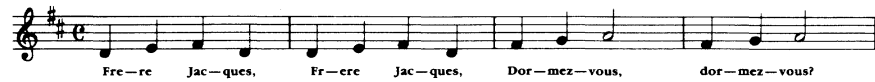


Along the top and bottom borders of the work area are a number of selectors—words or symbols that you use to select *The Music Studio's* composition and editing tools, playback tools, and accessories. Most tools are hidden in menus—lists of tools that pull down or pop up onto the work area when you point to a selector and press the mouse button.

The Work Area



The Music Studio



The Staffs

In the middle of the work area is the grand staff, made of the upper staff or treble clef and the lower staff or bass clef.

The staffs are where you place the notes of your composition. You can place up to 15 notes in a single column.

Scroll Handles

Invisible handles on the left and right ends of the staff let you move back and forth through a song. To use the scroll handles:

- Point to the left end of the staff to move toward the beginning of a song.
- Point to the right end of the staff to move toward the end of a song.

Blue arrows appear above and below the staff.

- Press the mouse button to begin scrolling.
- Release the button to stop scrolling.

Song Scroll Bar

The song scroll bar at the bottom of the work area lets you move back and forth through the song with ease. You can move anywhere in a song simply by pointing to a position on the scroll bar and clicking.

Song Slider

Point to and drag the song slider back and forth in the song scroll bar to move to any position in a song.

Current Column/Measure

This current column number shows the column displayed at the left end of the staff, or the column where the pointer is positioned on the staff. Click the current column number to jump to the beginning of a song.

When you have added measure bars with the **Goodies** selector and turned measure numbers on with the **Options** selector, this number shows the current measure.

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Last Column/Measure

This last column number shows the last column in the song. Click the last column number to jump to the end of a song.

When you have added measure bars with the **Goodies** selector and turned measure numbers on with the **Options** selector, this number shows the last measure.

Block Selectors and Block Markers

Block selectors are boxes used for placing the block marker. The block marker is a visual indicator used for block actions (see “Block Actions,” page 42). The block selectors appear when you move the pointer to the top or bottom edge of the work area.

To mark a block:

- Point to the top or bottom edge of the work area, just above or below the column where you want the block marker to begin. The block selectors appear at the top and bottom of the column.
- Click the mouse to set the start of the block marker. The green block marker appears in the column you’ve selected.
- Move to the last column you want to include in the marked block. Again, point to the top or bottom edge of the work area.
- Click to mark the end column. The block marker stretches to cover the beginning and end columns and all columns in between.
- After using a block action, remove the block marker by again clicking the upper or lower edge of the work area.

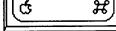
Composition and Editing Tools

Most of *The Music Studio*’s selectors are used for composing and editing songs.

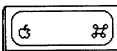
Note that many of the composition tools can also be called by command key combinations. Command key combinations are listed with the tools they work with.

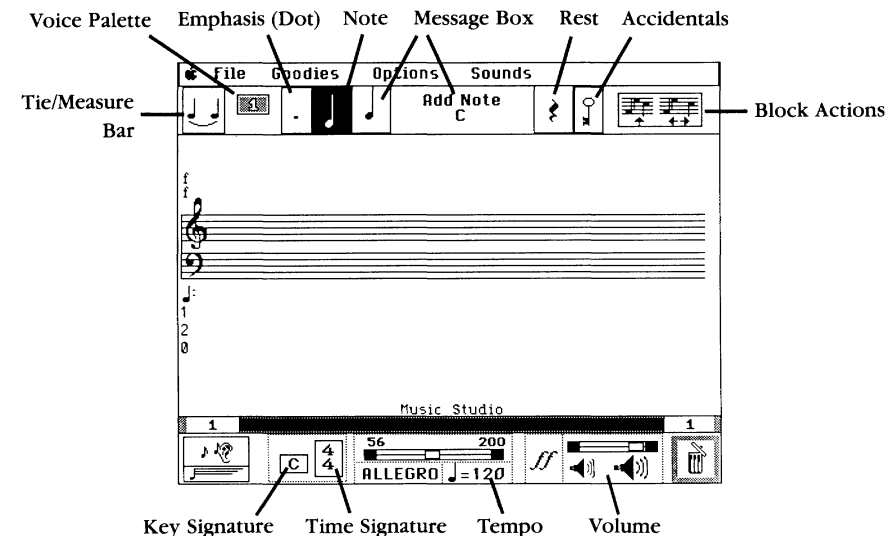
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To type a command key combination, press and hold the  key (the Apple key), then type the other key shown. For example:

Command-S

means hold down the  key and type S.



Message Box

The message box is actually two boxes. The small box on the left shows the note or rest selected (or last used). The larger box describes the tool you are using, and shows the position of notes as you place them on the staff.

Tie/Measure Bar

Press here for the tie/measure bar menu (or press **Command-1**), then point and release.

Use the tie to connect notes in the same voice of the same pitch:

- Select the tie. The pointer turns to a tie when you move to the staff.
- To place a tie, simply touch the left end of the tie pointer to the bottom of the first note you want to connect, then click.

Reference



- Touch the right end of the tie pointer to the bottom of the second note you want to connect, and click again.
- To remove a tie, position the tie pointer and repeat the process.

Note that you can't begin or end a block marker between two tied notes. Note also that you can use ties only to connect notes in the same voice of the same pitch.

Use the measure bar to mark individual measures of a song:

- Select the measure bar. The pointer turns to a measure bar when you move it to the staff.
- Place the measure bar between two columns and click.
- To remove a measure bar, place the measure bar pointer on a measure bar, then click.

You can also place measure bars throughout a song automatically using **Insert Measure Bars** from the **Goodies** menu.

Voice Palette

Press here for the voice palette (or press **Command-2**). The voice palette lets you pick an instrumental voice for the notes you place on the staff.

- Drag the pointer to the voice you want to select. The names of the voices appear in the message box as you move through the palette.
- Release the button.

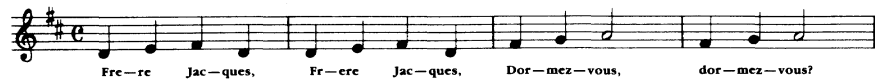
Note that you can load and save voice palettes using the **Sounds** menu. You can change the characteristics of the voices using **Design Instrument** from the **Goodies** menu.

Emphasis (Dot)

Press here for the emphasis menu (or press **Command-3**). This menu lets you dot, accent, or triplet the notes you place on the staff.

- Drag the pointer to the emphasis marker you want to use, then release. The emphasis marker appears on the note shown in the message box and is added to the notes you place on the staff.
- To remove emphasis, click the emphasis selector.

The Music Studio



Dot

The dot plays a note for one-and-a-half times its normal value. For example, a dotted half note plays as long as a half note *plus* a quarter note.

Accent

The accent makes notes play at a slightly higher volume. Make sure the volume slider is set a bit below the maximum, or you won't hear the accent.

Triplets

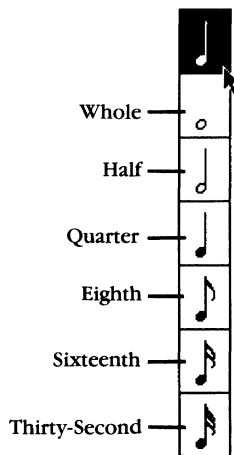
Triplets are placed three in a row. Three triplet notes play in the same time as two regular notes.



Note that a note can't be both dotted and a triplet.

Note

Press here for the note menu (or press **Command-4**), to select a note of any duration, from whole notes to thirty-second notes.



To place notes:

- Select a duration from the note menu.
- Point to the staff. The pointer turns to a note.
- Position the note pointer, then click.

Reference

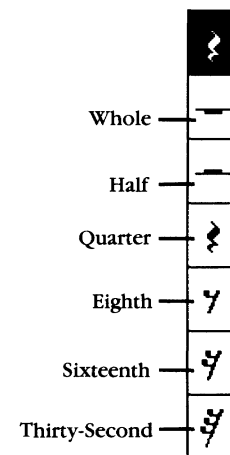


To erase a note:

- Position the note pointer over the note, then click. The notes can be of different durations, and you can also erase a note with the rest pointer.

Rest

Press here for the rest menu (or press **Command-5**), to select musical pauses of any duration—from whole rests to thirty-second rests.



To place rests:

- Drag the pointer to a duration in the rest menu.
- Point to the staff. The pointer turns to a rest.
- Position the rest pointer, then click.

To erase a rest:

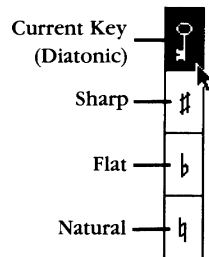
- Position the rest pointer over the rest on the staff and click. The two rests can be of different durations.

Accidentals

Press here for the accidentals menu (or press **Command-6**), to select sharp, flat, natural, or diatonic notes.

An accidental is a half step change in the pitch of a note. The key signature determines the natural pitch of each note on the staff, based on the scale for the key selected. Use accidentals to place notes not on the natural scale of the key chosen for the song. The *current key* selection returns to the diatonic note—the natural note of the scale.

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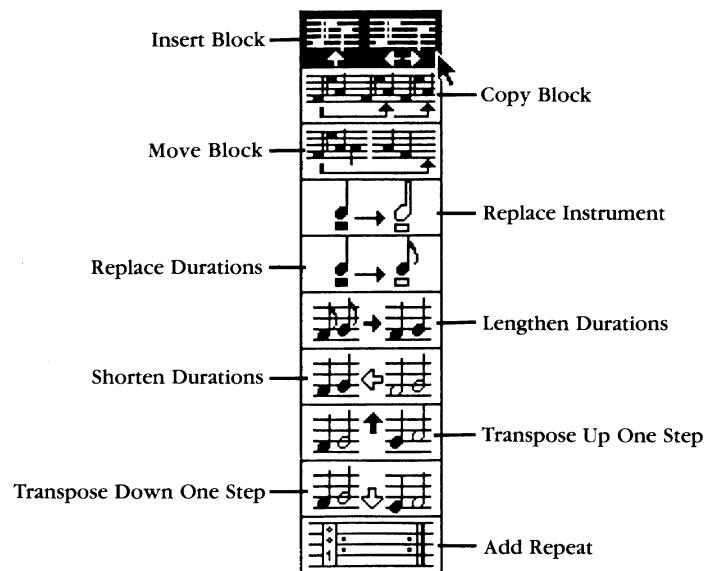


- When you select an accidental, it appears on the note displayed in the message box, and applies to all notes placed.
- To stop placing accidentals with notes, select current key.

Block Actions

Press here for the block actions menu (or press **Command-7**). Block actions let you change part of a composition or the entire piece.

To change a block of a song, you must first select it with the block markers, using the techniques described earlier (see “Block Selectors and Block Markers,” page 37).



Reference



Insert Block

Select **Insert Block** to add blank columns to a composition.

To add a single blank column, simply click the column that you want to follow the blank.

To add two or more blank columns:

- Place the left end of the block marker on the column that you want to follow the inserted block.
- Mark a block of columns as wide as the space you want to add.
- Click the marked block.

Copy Block

Use **Copy Block** to copy a passage of a song to anywhere in that song. Note that while other block actions affect an entire song when no block is marked, **Copy Block** works on an entire song only if you highlight the whole thing.

To use Copy Block:

- Mark a block to copy.
- Point to the column *following* the place where you want the copy to go, then click.

Note: You can use **Repeat Block** instead of **Copy Block** to play a passage or an entire song any number of times. See “Add Repeat,” page 46.

Move Block

Use **Move Block** to move a passage of a song to anywhere in the song. **Move Block** works only on the highlighted section of a song.

To use Move Block:

- Mark a block to move.
- Point to the column where you want the block moved, then click.

Replace Instrument

Use **Replace Instrument** to change notes from one voice to another. To replace an instrument:

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- Select the new instrument from the voice palette.
- Mark a block, or change the whole song.
- Click a note of the color you want to change.
- If you're changing the whole song, the program displays a dialog box:
Alters entire song! Sure?
- Click **OK** to make the change, or click **No** to leave the notes unchanged.

Replace Durations

Use **Replace Durations** to change all notes and rests of one duration to another. You can, for example, change all quarter notes and rests to eighths.

- From the note selector, pick the new note duration you want to use.
- Mark a block, or alter all the notes in the song.
- Point to a note of the duration you want to change, then click.
- If you're changing the whole song, the program displays a dialog box:
Alters entire song! Sure?
- Click **OK** to make the change, or click **No** to leave the notes unchanged.

Lengthen Durations

Use **Lengthen Durations** to double the duration of all notes and rests. Quarter notes become half notes, half notes become whole notes, etc. To lengthen durations:

- Mark a block, or lengthen all the notes in the song.
- Click anywhere on the marked block if you're lengthening durations within a block. Click anywhere on the staff if you're changing the whole song.
- If you're changing the whole song, the program displays a dialog box:
Alters entire song! Sure?
- Click **OK** to make the change, or click **No** to leave the notes unchanged.

Reference



Shorten Durations

Use **Shorten Durations** to cut the duration of all notes and rests in half. Quarter notes become eighth notes, half notes become quarter notes, etc. To shorten durations:

- Mark the block, or shorten all the notes in the whole song.
- Click the marked block if you're shortening durations within a block. Click anywhere on the staff if you're changing the whole song.
- If you're changing the whole song, the program displays a dialog box:
Alters entire song! Sure?
- Click **OK** to make the change, or click **No** to leave the notes unchanged.

Transpose Up One Step

Use **Transpose Up** to raise all notes and rests one whole note. A becomes B, C-sharp becomes D-sharp, etc. To transpose up:

- Mark a block, or transpose all the notes in the song.
- Click the marked block if you're transposing a block. Click anywhere on the staff if you're changing the whole song.
- If you're changing the whole song, the program displays a dialog box:
Alters entire song! Sure?
- Click **OK** to make the change, or click **No** to leave the notes unchanged.

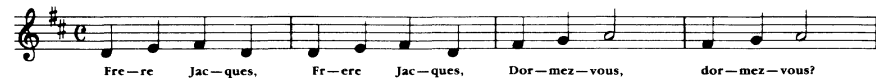
Note: You can also transpose a song or passage using the key signature selector at the lower left of the screen—see “Key Signature,” page 46.

Transpose Down One Step

Use **Transpose Down** to lower all notes and rests one whole note. A becomes G, B-flat becomes A-flat. To transpose down:

- Mark a block, or transpose all the notes in the song.
- Click the marked block if you're transposing a block. Click anywhere on the staff if you're changing the whole song.
- If you're changing the whole song, the program displays a dialog box:
Alters entire song! Sure?
- Click **OK** to make the change, or click **No** to leave the notes unchanged.

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Note: You can also transpose a song or passage using the key signature selector at the lower left of the screen—see “Key Signature,” page 46.

Add Repeat

Repeats let you play a passage or an entire song up to 127 times. You can repeat any number of passages within a song.

To use repeats:

- Mark a block, or repeat the entire song.
- Click the marked block to repeat that block or click anywhere on the staff to repeat the whole song.
- *The Music Studio* jumps you to the first part of the block being repeated, where the begin repeat marker is placed.
- Change the number of repeats by moving the mouse up and down. Click to set the number.

To erase repeats:

Be sure **Add Repeat** is selected from the block actions menu.

- Mark the repeated section of the song with the block markers (unless you’re removing a repeat for an entire song).
- Point to the beginning repeat marker and click.
- Move the mouse down to set the number of repeats to 1. Click again and the repeat is removed.

Key Signature

Press the key signature selector at the lower left of the screen to select the key signature for a song or a portion of a song.

To change the key for a song:

- Press the key signature selector, then point to the new key and release. The New Key window appears in the work area.
- Click **Transpose** to move the notes of the tune to the scale of the new key, or click **Change** to change the key of the song without moving the notes.
- Click **Do it** to complete the key change, or click **Cancel** to leave the key as it was.

Reference



To change the key for a portion of the song:

- Scroll the song so that the first column of the passage to change is at the left end of the staff.
- Press the key signature selector, then drag the pointer to the new key and release. The New Key window appears in the work area.
- Click **Insert** to add the new key signature to the column at the left of the staff.
- Click **Transpose** to move the notes of the tune to the scale of the new key. If you don’t click **Transpose**, the key of the passage changes, but the notes remain the same.
- Click **Do it** to complete the change, or click **Cancel** to leave the key as it was.

Time Signature

Press the time signature selector to select the time signature for the whole song.

About Time

The time signature is made of two numbers. The upper number represents the beats in a measure, the lower represents the duration of a beat. For example, 4/4 (the most common time signature) means each measure has four beats, and each beat is a quarter note. 6/8 means each measure has six beats, with one eighth note per beat.

To change the time signature for a whole song:

- Press the time signature selector, then point to the new time signature and release.

Tempo

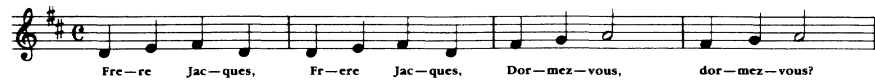
To set the tempo for an entire song:

- Drag the slider to set the tempo: 56 is slow, 200 is fast. The musical term for the tempo you’ve selected appears in the lower left of the tempo box.

To set the tempo for a portion of a song:

- Scroll through the song until the first notes that you want to change tempo for are at the left edge of the staff.

The Music Studio



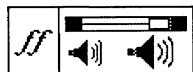
- Point to the tempo adjustment control at the bottom of the screen, and click on the “note equals” icon.

A new tempo indicator appears above the far-left column on the staff.

- Drag the tempo slider back and forth to set a new tempo, then release. The new tempo appears in the indicator above the far-left column.

You can place several tempo settings in a song using these same steps. Note that the tempo settings are saved with a song file.

Volume



Drag the sliding control to set the volume of playback, from soft (*pp*) to loud (*ff*). The two letters represent the dynamic setting and use standard musical notation.

Note that the volume you set is saved with a song file.

To set the volume for a section of a song:

- Move the song so that the first notes of the passage you want to set a new volume for are at the left of the staff.
- Click the dynamic setting (*ff*, *mp*, *pp*, etc.) in the lower portion of the screen, below the song slider. A volume setting indicator appears above the staff, at the beginning of the passage you’ve changed.
- Move the volume slider back and forth to set the volume for the passage.

You can repeat the process to adjust the volume for other sections of the song.

Trash

- Click trash twice to erase a whole song or a marked block of a song.
- To restore a song, click trash twice again, before you do anything else.

Note that when you erase a marked block, it can’t be restored.

When you switch on tracks (from the **Options** menu) only notes assigned to a selected track are erased (see “Studio Techniques” in chapter 6 of the guided tour). Notes that are erased when the tracks are switched on cannot be restored.

Reference



Playback Tools



Ear

- Click the ear symbol to play an entire song or a highlighted block of a song. Click again anywhere on the screen to stop.

Flying Note

- Click the flying note symbol to play a song. If a block is highlighted, the flying note begins playing the song with the first highlighted column. If not, the flying note begins play with the first column at the left end of the staff. The song scrolls as it plays.
- When you let the song play to the end, the program returns to the notes where you started.
- If you click to stop the song, it remains on screen where you stopped it. This is helpful when you want to find a specific note or passage.

The Accessories Menu

Across the top of the screen is the accessories menu, a set of selectors offering a variety of tools and options that help you with your work.

Apple

- Press the apple symbol for copyright information about *The Music Studio*.

The Accessory Menus

The **File**, **Goodies**, **Options**, and **Sounds** selectors all have pull-down menus that appear when you point to them and press. These are used to select important composition, editing, and file-saving tools. Each accessory menu is covered separately, in the next four sections.

The Music Studio



Reference



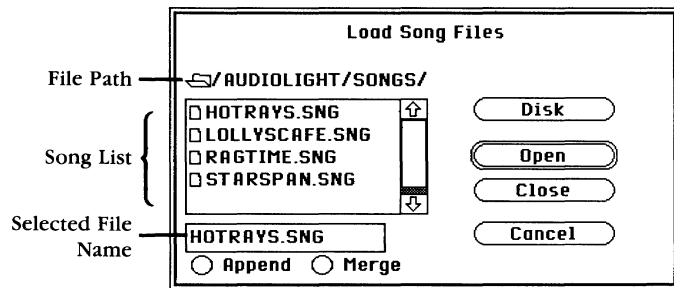
File

- Press the word **File** at the top of the screen to get the **File** menu.

From the **File** menu, you can select one of several file operations.

Open

Use this selection to open song files saved to the disk (or press **Command-O**). When you select **Open**, this window appears:



File Path. Shows the disk volume and folders currently open.

Song List. Lists the songs, wave banks, and sound files on the current disk and path. Drag the slider at the right of the list to scroll through the songs.

File Name. Lists the song currently loaded or the song you've selected from the song list.

Append/Merge. These let you choose to add the song you are loading to the song currently in the work area. **Append** adds the song at the end of the current song. **Merge** places the two songs together, so that both begin at the same point.

Disk. Click here to change disk drives (if you have two drives) or to change the disk.

Open. Lets you open a new folder or song file.

Close. Lets you close a folder.

Cancel. Click here to close the **Load Song Files** window and return to the work area.

To load a song file:

- Drag the highlight to **Open** or type **Command-O**. The **Load Song Files** window opens.
- To open a folder, highlight the name and click the **Open** button.
- Double-click the name of the song you want to load in the song list. Or, click the name of the song, then click **Open**.

The **Load Song Files** window closes, and the song appears in the work area.

Save

Once you've saved a song, you can save it again by the same name in a single step, without opening the **Save Song Files** window. To save a song the first time, or to save a song by a new name, see "Save As" described below.

To save a song by its previous name:

- Drag the highlight to **Save** and release, or press **Command-S**. A message appears in the File Name bar:

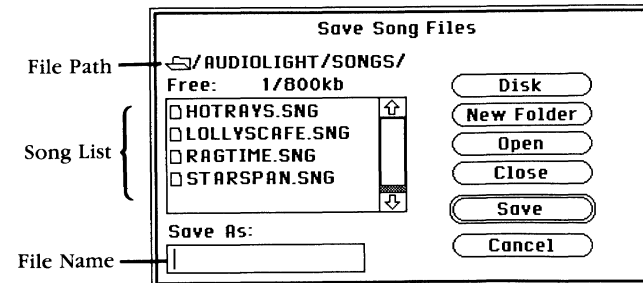
Replace (songname)?

- Click **OK** to save the song. Click **No** to cancel without saving.

Save As

Use this option to save a song the first time, or to save a song by a new name. Use the **Save** selection to save a song by the same name once you have named it using **Save as**.

When you drag the pointer to **Save as** and release, this window appears:



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File Path. Shows the disk volume and folders currently open.

Song List. Lists the songs on the current disk and path. Drag the slider at the right of the list to scroll through the songs.

Save As. Lets you type in the name for the song, or displays the name previously used for the song.

Disk. Click here to change disk drives (if you have two drives) or to change the disk.

New Folder. Lets you create and open a new folder on the currently selected disk. To do so, simply click here, then type the name for the folder in the **Save As** box, and press **Return**.

Open. Lets you open an existing folder.

Close. Lets you close a folder.

Save. Double-click here to save the song by its existing name.

Cancel. Click here to close the **Save Song Files** window without saving and return to the work area.

To save a new song:

- Drag the pointer to **Save As** and release.
- If you have two drives, click **Drive** to change to the second disk drive. Make sure a formatted disk is loaded in the drive.
- If you have one drive, remove the “Program” disk, insert a formatted disk in the drive, then click **Drive**.
- To place a new folder on the disk, click **New Folder**, then type a name for the folder in the **Save As** box, and press **Return**.
- To open a folder, click the folder name on the song list, then click **Open**.
- Click the **Save As:** box. A cursor bar appears.
- Type a name for the song, up to 10 characters. Add the extension **.SNG** to the name and press **Return**.

To save a song by a new name:

- Drag the pointer to **Save As** and release.
- Press the **Delete** key several times to remove the previous name from the **Save As:** box.
- Type the new name (include the extension **.SNG**) and press **Return**.

Reference



Keep in mind that you can't save songs on *The Music Studio* “Program” disk. Instead, you'll need to place a formatted disk with sufficient space for your song in the disk drive.

Revert

Select **Revert** when you want to change a song back to the version you last saved to disk. **Revert** clears any changes you've made and loads the song from disk.

- Drag the pointer to **Revert** and release.
- A dialog box appears:
Discard recent changes?
- Click **OK** to load the song from disk, or click **Cancel** to keep the song in the work area.

Rename/Delete

These choices let you change the name of any song on the disk, or delete a song from the disk.

To rename a song:

- Drag the highlight to **Rename** and release.
- The window that appears has the same controls as the **Save Song File** window. You can change disks with **Disk**, and use the **Open** and **Close** selectors to choose a new folder.
- On the song list, click the name of the song you want to rename.
- Click **Rename**.
- A text cursor bar appears in the **Save As:** box. Type your new name and press **Return**.

To delete a song from disk:

- Drag the highlight to **Delete** and release.
- The window that appears has the same controls as the **Save Song File** window.
- Click the name of the song you want to delete in the song list.

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- A dialog box appears:

Really delete
(SONGNAME)

- Click **OK** to delete the file. Click **No** to stop without deleting.

Jukebox

Select **Jukebox** to play a selection (a play list) of your own compositions—or *The Music Studio*'s prerecorded compositions—in any order you choose. For details on the Jukebox, see Chapter 2 of the guided tour, "Playing and Painting Songs."

Print Song

If you have a printer connected to your Apple IIGs, you can print your songs—words and music—using this selection from the **File** menu.

- Before you print, make sure your printer is on, on-line, and loaded with paper.
- Select **Print Song** from the **File** menu. The **Printer Ready** dialog box appears in the work area.
- Check the printer, then click **Ready**. Click **Cancel** to stop without printing.

Quit

- Select **Quit** to leave *The Music Studio* program.
- If you've made recent changes to your work, a dialog box appears:
Discard recent changes?
- If you don't wish to keep your changes, click **OK**; if you wish to save your song, click **Cancel**.

Goodies

The **Goodies** menu gives you access to a number of *The Music Studio*'s auxiliary composition tools.

Reference



Paintbox

Paintbox provides a way for the non-musician to begin creating original music, by painting sounds from a musical palette on the screen. The **Paintbox** is very intuitive—and very easy to use.

For an example of how to use the **Paintbox**, see Chapter 2 of the guided tour, "Playing and Painting Songs."

Design Instrument

The **Design Instrument** window presents a full-featured waveform editor and control panel for creating complex instrumental sounds. It includes a graphic representation of the instrument's ADSR characteristics, and provides a number of controls for adjusting the properties of that instrument.

For step-by-step details on using **Design Instrument**, see Chapter 5 of the guided tour, "New Voices."

MIDI Parameters Window

MIDI Parameters let you set controls for activating the MIDI interface. The MIDI interface lets you play songs composed with *The Music Studio* on your MIDI-compatible instrument. For a full discussion of using the MIDI interface, see Chapter 4 of the guided tour, "MIDI Mastery."

Change Song Title

This **Goodies** menu selection lets you add a title to your song—a title that replaces **Music Studio** at the bottom of the work area. This title can be different than the name you give the song file.

The song title is saved with the song file. Whenever you load the song into *The Music Studio*, the title appears at the bottom of the work area.

To give a song a title:

- Choose **Change Song Title** from the **Goodies** menu. A prompt and text cursor appear at the bottom of the work area.
- Type your title, then press **Return**. Your title can be up to 30 characters long. The title is saved when you save your song.

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Insert Measure Bars

Insert Measure Bars automatically adds measure bars throughout the song you're working on. To add measure bars, you need to first add a time signature to your song.

Note that you can also place individual measure bars using the **Measure Bar** selection from the tie/measure bar menu.

To place measure bars, first use the time signature selector to set beats per measure (see page 47).

Options

Use the **Options** menu to turn some of *The Music Studio*'s features on and off. Some options provide two different menu selections, depending on their current setting; others are simply checked when they are selected.

Add/Remove Lyrics

You can add up to three verses of lyrics to a song using this feature. Lyrics are placed in the lower portion of the work area, below the bass clef. Your lyrics are saved when you save the song.

Once you add lyrics, the **Goodies** menu changes to list **Remove Lyrics**. Selecting this item deletes the lyrics from the screen. However, they remain on the disk file if you've saved the song.

To add lyrics:

- Select **Add Lyrics** from the **Options** menu. Three verse numbers appear at the lower left of the work area.
- Move the song so that the notes where the lyrics should begin are at the left edge of the work area.
- Point below the first note, next to the first verse number, and click. A text cursor appears.
- Begin typing lyrics.
- Use the **left/right arrow** keys to move back and forth through your lyrics.
- Use the **up/down arrow** keys to move to the other verses.
- To erase a mistake, position the cursor over it and press the **Delete** key.

Reference



- To type over a mistake, position the cursor over it and type the correction.
- To finish lyrics, simply press the mouse button or **Return**—your lyrics remain on the screen.
- To begin typing again, click the lyric line anywhere you want to place lyrics.
- You may want to add spaces between the columns of your song to accommodate the lyrics. To do so, use the **Insert Block** selection from the block actions menu.

To remove lyrics:

- From the **Goodies** menu, select **Remove Lyrics**. The lyrics are permanently deleted from the screen.

Use Tracks

Like a multi-track recorder, *The Music Studio* lets you place voices on four different tracks. **Use Tracks** lets you hear individual voices in your songs, by turning them on and off independently. For a complete discussion and example of multi-track recording with *The Music Studio*, see Chapter 6 of the guided tour, "Studio Techniques."

Measure Numbers Off/On

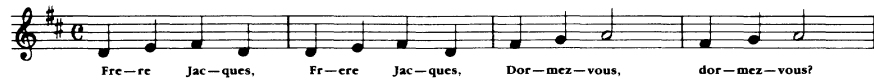
Use this selection to show the measure numbers. To do so, first use the **Insert Measure Bars** selection from the **Goodies** menu, or add measures using the tie/measure bar selector. When you set **Measure Numbers On**, the numbers appear at the end of each measure, just above and before the measure bar. Also, the current column/end column indicators next to the song scroll bar change to show the current measure/end measure.

Flip Note

This control inverts the stem on the note pointer and on any notes you place with the pointer. This is useful when you are placing any note with a stem (all but the whole note) high on the bass or treble clefs: inverted stems are standard musical notation for these positions.



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To flip a note:

- Select a note with a stem from the notes menu.
- From the **Options** menu, select **Flip Note** or press the **spacebar**.
- To flip the note back, select **Flip Note** or press the **spacebar** again.

Use 1 Instrument

Use this feature to play your song without instrumentation. It plays your song as though all the notes were in the same voice.

- Using the voice palette, select the instrument that you want to use to play your song.
- From the **Options** menu, select **Use 1 Instrument**.
- Click the ear or flying note selector to play your song.
- To return to normal play, pull down the **Options** menu and select **Use 1 Instrument** again.

Turn Note Off

Use this selection to turn the sound of the note pointer (used for placing notes on the staff) on and off. Select it once to turn the sound off, select it again to turn it on.

Turn IIGS Off/Turn MIDI Off

These controls select the Apple IIGS, the MIDI, or both for playing your songs. A check mark indicates that the setting is *off*; no check means the setting is *on*. Pull down the **Options** menu, drag the highlight to the control you want to set, then release the mouse button to make the setting.

You also need to use the **MIDI Parameters** window (described in chapter 4 of the guided tour) to control MIDI playback.

Note: If no MIDI controller is installed in your Apple IIGS, the **Turn MIDI Off** and **Turn IIGS Off** selections appear in grey, indicating that you can't select these options.

Sounds

This selector opens the **Sounds** menu. Use the **Sounds** menu to load alternate sound files from *The Music Studio* disk and to save sound files to your

Reference

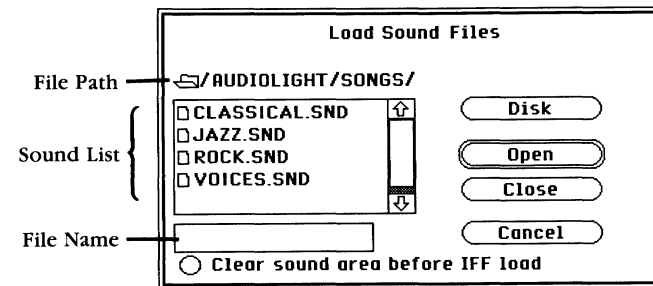


song disk. You can also use the **Sounds** menu to save instrument voices you create in the **Design Instrument** window (see “Goodies,” above).

The Music Studio offers a voice palette with 15 color-coded instrument positions. The sound file that loads with the program provides one instrument for each position. Note that, depending on the sound file you load, you may not always have 15 instruments available in the voice palette.

Open

Use this selection to open sound files saved to the disk. When you select **Open**, this window appears:



File Path. Shows the disk volume and folders currently open.

Sound List. Lists the sounds on the current disk and path. Drag the slider at the right of the list to scroll through the sounds.

File Name. Lists the sound currently loaded or the sound you've selected from the Sound List.

Clear sound area before IFF load. Lets you load voice samples created in standard interchange format. Clearing the sound area removes other voices before loading a new sound sample.

Disk. Click here to change the current disk drive. If you have two drives, be sure to click here to change drives the first time you save a sound to disk.

Open. Lets you open a new folder or sound file.

Close. Lets you close a folder.

Cancel. Click here to close the **Load Sound Files** window and return to the work area.

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To load a sound file:

- Drag the highlight to **Open**. The **Load Sound Files** window opens.
- If you have two drives and want to load a sound from your own disk, use the **Disk** button to change disk drives.
- Use the **Open** button to open a folder on the drive.
- Double-click the name of the sound you want to load in the Sound List, or click the name of the sound, then click **Open**.

The **Load Sound Files** window closes, and the sound is loaded. Using the voice palette now selects voices from the new sound file.

Save

Saves a sound previously saved to disk in a single step, without opening the **Save Sound Files** window. The first time you save a sound file, you'll need to use the **Save As** selection, described below.

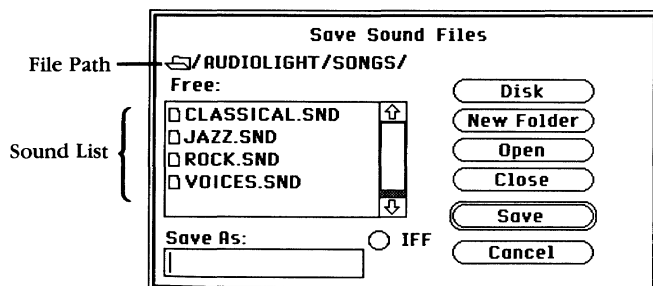
To save a sound by its previous name:

- Drag the highlight to **Save** and release. A message appears in the File Name bar:
Replace (soundname)?
- Click **OK** to save the sound. Click **No** to cancel without saving.

Save As

Use this option to save a sound the first time, or to save a sound by a new name. Use the **Save** selection to save a sound by the same name once you have named it with **Save As**.

When you drag the pointer to **Save As** and release, this window appears:



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File Path. Shows the disk volume and folders currently open.

Sound List. Lists the sounds on the current disk and path. Drag the slider at the right of the list to scroll through the sounds.

Save As. Lets you type in the name for the sound, or displays the name previously used for the sound.

IFF. Lets you save sounds in the Apple standard voice file format.

Disk. Click here to change disk drives (if you have two drives) or to change the disk (if you have one drive).

New Folder. Lets you create and open a new folder on the currently selected disk. To do so, simply click here, then type the name for the folder in the **Save As** box, and press **Return**.

Open. Lets you open an existing folder.

Close. Lets you close a folder.

Save. Double-click here to save the sound by its existing name.

Cancel. Click here to close the **Save Sound Files** window without saving the sound and return to the work area.

To save a new sound:

- Drag the pointer to **Save As** and release.
- If you have two drives, click **Drive** to change to the second disk drive. Make sure a formatted disk is loaded in the drive.
- If you have one drive, remove the "Program" disk and insert a formatted disk in the drive, then click **Drive**.
- To place a new folder on the disk, click **New Folder**, then type a name for the folder in the **Save As:** box, and press **Return**.
- To open a folder, click the folder name in the Sound List, then click **Open**.
- Click the **Save As:** box. A cursor bar appears.
- Type a name for the sound, up to 10 characters. Add the extension **.SND** to the name, and press **Return**.

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To save a sound by a new name:

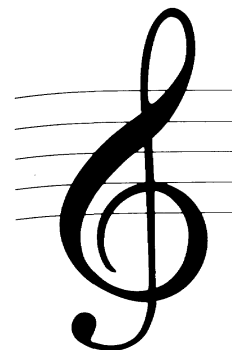
- Drag the pointer to **Save As** and release.
- Press the **Delete** key several times to remove the previous name from the **Save As:** box
- Type the new name (include the extension **.SND**), and press **Return**.

Keep in mind that you can't save sounds to *The Music Studio* "Program" disk. Instead, you'll need to place a formatted disk with sufficient space for your sound in the disk drive.

Revert

Select **Revert** when you want to change a sound back to the version you last saved to disk. **Revert** clears any changes you've made with **Design Instrument** and loads the sound from disk.

- Drag the pointer to **Revert** and release.
- A dialog box appears:
Discard recent changes?
- Click **OK** to load the sound from disk. Click **Cancel** to keep the sound in the work area.



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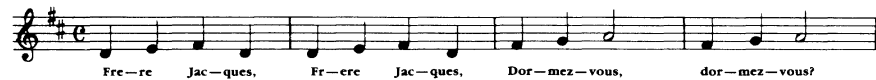
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