

## Music FUN(damentals): Demo Version a learning environment by William Ermey

**Summary:** Music FUN(damentals) is designed to help you practice the basic concepts of music theory—both written and aural—in an enjoyable, game-like format. Answers may be entered as text, by playing on a musical keyboard, or by placing notes on the staff. Subjects covered include: **note names** (including enharmonic equivalents); **major and minor key signatures** (and their relationships); **scale forms** (including major; the three minor forms; ionian, dorian, phrygian, lydian, mixolydian, and aeolian modes; wholetone; and pentatonic); **intervals** and their inversions; **triads** (major, minor, diminished, and augmented) and their inversions; **seventh chords** (MM, Mm, mm, dm, dd) and their inversions; and **clefs** (soprano, alto, tenor, and bass). It is possible to hide the notation and use the program to improve **aural skills**.

**Compatibility:** Music FUN requires at least a MacPlus running System 6.0 or higher. The program may be enhanced through the use of a MIDI synthesizer, but is fully usable without one. Music FUN is MultiFinder compatible and is not copy protected. A special Lab Version, designed to work as a shared application under AppleShare, is also available.

**About the Demo Version:** This demo version of Music FUN is meant to show most of the capabilities of the program so you can determine before ordering if it suits your needs. It differs from the full version in several important respects. *The print and MIDI functions are disabled. Only a narrow range of notes around middle c is available; clef, interval, scale, and chord choices, etc., are restricted to a small example set; In most games, options are restricted. Those not available are visible, but disabled.* The full version selects starting pitches for each game at random from a four octave range and its questions and options from all those available. This document is meant to work in conjunction with the help file available from the menu and presents only a portion of the full manual.

**Ordering Information: Cost:** \$69.95. Multiple copies (5 or more) may be ordered on school or university purchase orders for \$35.00 per copy. A Demo Version with the full instruction manual is \$10. Rhode Island residents add 6% sales tax. Music FUN may be purchased from:

TransComp  
74 Memorial Road  
Providence, RI 02906  
401-272-4641

**About the author:** *William Ermey* is Associate Professor of Music at Brown University, where he directs the Brown University Chorus and teaches courses in music theory, conducting, and computer applications in music.

***This document and the software described in it ©William Ermey, 1987-1989. The Demo Version of Music FUN may be distributed freely as long as this document accompanies it and both remain unmodified.***

## The Menus

### File:

**Create:** creates a new Music FUN ScoreCard with the name you provide.

**Open:** opens an existing Music FUN ScoreCard from the files shown.

**Close:** closes the Music FUN game you are presently playing.

**Save:** saves the current ScoreCard.

**Select Game Group:** From the second group you may select the game type you would like to play. Changing types ends the previous game and sets up the new one.

**Show Score Card:** displays a comprehensive record of your best ten scores while working in this ScoreCard, the date and accuracy records, the preferences and options set while playing, and the time spent in each of the 10 games as well as the total time spent in the ScoreCard. A complete list of the abbreviations used on the ScoreCard is found at the end of this document. In the Full Version, pressing the Print button sends the ScoreCard to the default printer.

**Transfer:** moves directly to the application you select without going to the Finder.

**Quit:** finishes your practice session and returns you to the Finder.

**Preferences:** (general choices which remain valid in all Music FUN's game types)

**Group I: Entry Mode:** (controls the way you enter your answers and the type of questions the program asks)

**Text Entry:** answer questions from the computer typewriter keyboard. When this choice is made, the text entry box is displayed underneath the staff, the text entry marker will be blinking, and typewritten responses from the Mac keyboard will be shown. *To end your response, hit the return key.* If the text box is showing, answers will not be accepted from the graphic keyboard or by placing notes on the staff. In the Scale game the text box is not displayed; text answers are accepted by clicking in the appropriate scale button displayed at the bottom of the screen.

**Keyboard Entry:** answer questions from the graphic (or, in the full version, a MIDI) keyboard. The text entry box will not be present; instead, you will see a picture of a short musical keyboard. When the graphic keyboard is present, you may answer questions using it (or, in the full version, a MIDI synthesizer). To use the graphic keyboard, place the cursor on the key you want to play, and click. If more than one note is required for an answer (as in chord games) click on as many notes as you need. Music FUN knows how many notes should be entered for each game type, so there is no need to hit the return key to signify that you have completed your answer. The "C" in the middle of the graphic keyboard represents "middle C".

**Staff Entry:** using the cursor and the accidental palette, draw your answer on the staff. When this mode is chosen, a palette containing all the appropriate accidentals appears to the left of the staff. Using the cursor, select the accidental which you wish to apply to the note you will place on the staff. When the cursor is over the staff it will change to a whole note with the accidental highlighted on the palette. Center the note on the correct line or space for your answer, and click. In games which require more than one note answers (scales, triads, and seventh chords), a new button labeled **Clear** will appear below the score box, next to the **Replay** button. Pressing it will clear all the notes you have entered so far. If you make a mistake while entering your response, press the button, and reenter

your entire answer. Music FUN knows how many notes should be entered for each game type, so there is no need to hit the return key to signify that you have completed your answer. You may also move through the palette using keyboard equivalents. Hitting the down cursor key or the tab key will move the selection down in the sequence of accidentals to the next box. Hitting the up cursor key or holding down the shift key while hitting the tab key will move the selection up in the sequence of accidentals to the next box.

**Group II: Skill Mode:** (controls how much information the program gives you so that you can practice primarily theoretical or aural skills)

**Written Skills:** Music FUN shows you the quality of the chord (interval, scale, etc.) that it wants you to identify or (depending on the Entry Mode selected) tells you what quality to play or enter.

**Aural Skills:** Music FUN suppresses part or all of the graphic display of its questions when appropriate, and asks you to answer based on your ear, not your eye. (Note: In some game types, only one choice is appropriate, and the program defaults to it. For example, it is not possible to identify key signatures without seeing them, and the program automatically checks *Written Skills*).

**Group III: Sound Functions:** (allows you to set various parameters of sound)

**Set Sound: Volume and Speed Controls:** You may change the volume at which notes are played by moving the slide bar marked Volume Control. The Speed Control changes the speed at which notes are played as well as the pace at which the program responds. To change either control, move the control box in the desired direction and select OK at the bottom of the box. A note or two will sound to let you hear what your selection sounds like.

**Timbre Control:** You may change the tone color which Music FUN uses to play its examples on the Macintosh internal speaker. Pick the timbre you wish to hear by clicking the appropriate button.

**Replays allowed:** lets you set the number of times Music FUN will allow you to rehear an example. The default is 'unlimited'. When you exceed the maximum number set here, the replay button will become inactive.

**Response Time:** allows you to set an arbitrary time limit for yourself. The default is 'unlimited', but you may change it to long, medium, or short if you want to make the game more challenging. A timer box will appear in the upper right hand corner of the screen which displays how much time you have remaining to answer the question. If you do not answer within the prescribed time limit, Music FUN will count the attempt incorrect, and give you another chance.

*Sound Output Control:*

*Mac Sound:* sound output is through the built in Mac speaker, or through headphones attached to the output jack in the rear of your machine.

*MIDI Sound:* In the full version, you may connect a MIDI synthesizer to your Mac in order to gain control over the tone color and the ability to enter your answers in Keyboard entry mode on a real keyboard. Choose which of the Macintosh ports you have connected the MIDI interface unit to (modem port or printer port). MIDI output is preset at 1.0 Mhz for the most common MIDI devices. When a MIDI keyboard is in operation, sound through the Mac speaker is disabled.

**Clefs:** allows you to select the clefs and range from which Music FUN will choose when presenting its questions. You must select at least one clef in order to play Music FUN. Only soprano and alto clefs are allowed in the Demo Version.

**Options:** (the items in this menu change depending on which game you have selected from the **File** Menu, allowing you to set up the options appropriate for the game you have currently selected)

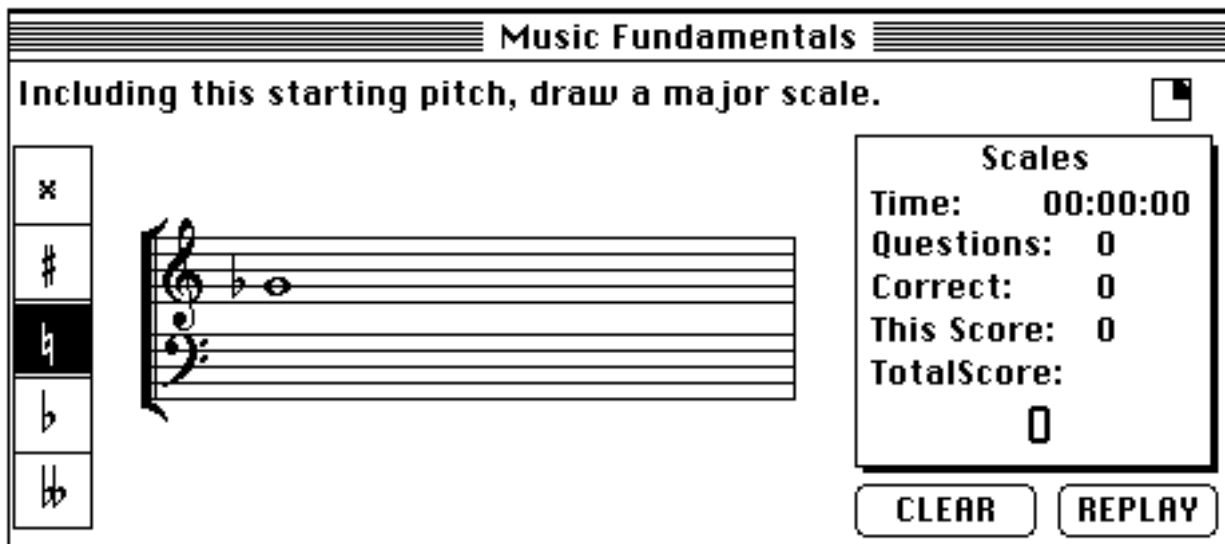
**Help:** (seven screens which present a brief summary of the information included in the User's Manual. The first of these provides a summary of the text responses Music FUN can understand. The final item lists the keyboard equivalents available for use.)

### Keyboard Equivalents

1. Command-**R** is equivalent to hitting the **Replay** button.
2. Command-**X** is equivalent to hitting the **Clear** button.
3. tab (or down cursor) is equivalent to hitting the next lowest choice in the accidental palette when it appears on the screen during Staff Entry mode.
4. shift-tab (or up cursor) is equivalent to hitting the next highest choice in the accidental palette when it appears on the screen during Staff Entry mode.
5. Command-**>** will increase the volume setting. Command-**<** decreases it.
6. Command-**]** will increase the speed setting. Command-**[** decreases it.
7. Hitting the space bar at the point where Music FUN displays the correct answer will hold the answer on the screen until you hit the space bar again.

### Playing the Game

Open the Music FUN application from the Finder. If you have played Music FUN before, you created a Music FUN ScoreCard. You may also open the program by double-clicking on this document icon. When opened from the document icon, the program will take you directly into the game, with all options set as you left them. When opened from the application icon, Music FUN will display a welcome screen inviting you to open or create a Music FUN ScoreCard. To create a new ScoreCard, select **New** from the **File** menu and enter the name you wish to use for your personal ScoreCard. After you create a new Music FUN ScoreCard, you will see a dialog box asking you to indicate which game you want to play. Select the appropriate button, and then click **OK**.



Music FUN will randomly select its first question and, at the top of the game screen, prompt you how to answer. If you are entering answers using the text box underneath the staff, you must end your answer with a carriage return. If you are entering answers from the keyboard or by placing notes on the staff with the cursor, Music FUN knows how many notes are required for a correct answer and responds as soon as the last note has been entered. If you get frustrated with a question, you may hit the carriage return. The program interprets a carriage return as the conclusion of an answer and proceeds to the next stage of the game whether you have actually entered an answer or not.

The **Replay** button allows you to rehear the last example played by the program. This function is duplicated by the command-**R** key combination.

The **Clear** button appears next to the **Replay** button in games which require more than one note answers (scales, triads, and seventh chords). Pressing it will clear all the notes you have entered. If you make a mistake while entering your response, you can press the button and reenter your entire answer. This function is duplicated by the command-**X** key combination.

When you answer a question correctly, Music FUN congratulates you, posts your new score, and proceeds to the next question. If you answer incorrectly, Music FUN tells you and gives you another chance. If you haven't gotten the question right after four responses, the program will show you the correct answer and move to the next question. In either case, hitting the spacebar while the program is displaying the correct answer will interrupt the game, allowing you to think about the correct answer and replay the entire example as many times as you wish. Hitting the spacebar a second time resumes normal play. You may play any game for as long as you wish. You may change your preferences or options at any time using the appropriate menu choices, or change the game type from the **File** menu. Most changes will reset your score to zero so that you may fairly track your progress.

If you wish to change ScoreCards, choose Close under the **File** menu to end your present game, then chose **Open** or **Create** from the **File** menu to open an existing ScoreCard or create a new

one. When you are through playing Music FUN, choose **Quit** from the **File** menu. Your working ScoreCard will be saved automatically.

**Scoring:** The program keeps a running total of your cumulative score and presents it along with other information on your performance in the score box. The score on a given example is based on a formula which takes into account the difficulty of the options you have set up for yourself, the number of tries you made before getting the correct answer, and finally the time it required to answer correctly. You can increase your score substantially by answering questions using the **Aural Skills** choice under the **Preferences** menu. You receive bonus points for answers in the alto or tenor clef and for selecting from a wider variety of clef and chord choices (where appropriate). The skills which have to be learned to play Music FUN are conceptually very simple. In order to progress to more challenging questions of music theory, this material needs to be mastered so that your answers become practically automatic. Work to achieve the fastest possible times in your answers without sacrificing your accuracy score.

Scoring is reset to zero when a change of options affects scoring, when a new game is selected, or after the ScoreCard is saved under the **File** menu. If your score is high enough, the ScoreCard will automatically be updated and saved when you leave the game or change options or preferences.

**Notes:**

1. When playing the **Scale** game in **Text Entry** mode a set of buttons is shown at the bottom of the screen. Click on the button named with the scale you wish to answer.
2. In the **Key Signature** game there is no sound output, since key signatures by themselves have no sound; the **Aural Skills** in the **Preferences** menu is grayed out. When you choose to enter answers by placing notes on the staff, you will normally be asked to enter the tonic of the key signature indicated. However, it is possible to practice drawing the key signatures on the staff. Return to the menu bar and select **Staff Entry**. Choose **Aural Skills**. The program will display a short palette containing only a sharp and a flat. Select the appropriate accidental for the key requested in the prompt, and put the accidental signs on the staff in their correct location *and* order. After you enter your answer, hit <return>.
3. In the Chords/Inversions game, if you have chosen **+Inversions** from the **Inversions** sub menu under **Options**, after you have correctly answered the quality of the chord presented, the program will prompt you to identify the inversion by typing the chord factor of the lowest voice (*text entry mode*), by playing the root of the chord on the keyboard (*keyboard entry mode*), or by entering the root of the chord on the staff (*staff entry mode*).

## Text Entry Abbreviations

**Accidentals:**

sharp: #;	flat: b;
double sharp: x;	double flat: bb;
naturals: just type the letter name of the note.	

**Quality:** The program is case-sensitive. Use uppercase letters for major and perfect quality items and lowercase letters for minor and diminished items. This rule applies to all key signatures, intervals, triads, and seventh chords. Examples: Eb for E flat major, eb for e flat minor; m3 for minor third, M3 for major third; d for diminished triad quality, P for Perfect interval quality, etc.

*Intervals and triads:*

		P	=	Perfect	
M	=	Major	m	=	minor
A	=	Augmented	d	=	diminished.

*Seventh chords:*

MM	=	Major-Major
Mm	=	Major-minor
mm	=	minor-minor
dm	=	diminished-minor (half diminished)
dd	=	diminished-diminished (fully diminished)

**ScoreCard Abbreviations****Preferences**

First Item = Entry Mode: T = text, K = keyboard, S = staff; Second Item = Skill: W = Written Skills, A = Aural Skills; Third Item = Clefs chosen: (SATB); Fourth Item = Replays allowed; Fifth Item = Response Time.

**Options**

NoteNames: W = White Notes; A = Accidentals; N = Normal; E = Enharmonic

Key Signatures:

M = Mode: Major only; m = Mode: minor only; Mm = Mode: major and minor

X# = Max No. of accidentals in key

Sn = Special: normal; Sr = Special: relative relationship; Sp = Special: parallel relationship

Scales:

1 = Major and natural minor scales; 2 = Major and 3 minor forms; 3 = 3 minor forms only; 4 = church modes; 5 =

All the above+wholetone and pentatonic

Intervals:

u = Direction: above; d = Direction: below; b = Direction: both above and below

m = Accidentals: more; f = Accidentals: fewer

h = Difficulty: harder; e = Difficulty: easier

c = Presentation: consecutive; s = Presentation: simultaneous

y = Inversions; n = no inversions

Triads:

Q = Quality: M = major; m = minor; d = diminished; A = Augmented

c = Presentation: consecutive; s = Presentation: simultaneous

Chords/Inversion:

Q: = Quality: 1 = MM; 2 = Mm; 3 = mm; 4 = dm; 5 = dd; T = Triads

c = Presentation: consecutive; s = Presentation: simultaneous

y = Inversions; n = no inversion

**Email Addresses**

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