Contents

1 Introduction to Computer Sound

 Types of Computer Generated Sound

 Sound Hardware

Setting Up Music Ace 2 on a Window System

 Overview

 Step 1.
 Before You Begin

 Step 2.
 Installing Music Ace 2

 Step 3.
 Configuring Sound for Music Ace 2

Step 4. Calibrating Latency in Music Ace 2

Step 5. Solving Common Problems

🞾 Technical Support

 Technical Support Information
 Solving Common Problems

Wave Sound

Wave sound, also called digitized sound, consists of recordings of actual sounds that can be played back just as if they had been recorded on a tape recorder. Wave sounds are contained in files called Wave files. If your computer has a sound card, it is probably capable of playing Wave files. Music Ace 2 uses these digitized sounds (Wave sounds) for sound effects such as applause, and for Maestro Max' voice. The various Windows sound effects that may be installed on your computer, such as Windows start and exit sounds, are examples of Wave files. (Note: "Wave" sound should not be confused with "Wave Table" sound cards). Wave sound is fundamentally different from the other type of computer generated sound called MIDI sound.

MIDI Sound

The term MIDI is an abbreviation for "Musical Instrument Digital Interface". Its original meaning refers to the interface between a computer and an external electronic musical instrument, usually a MIDI keyboard. Windows terminology has broadened the meaning of MIDI to refer to computer-generated sound that is musical note based, whether the notes play on an external MIDI keyboard or on a sound card. MIDI is useful for playing musical notes, composing music, etc. MIDI sounds are much more flexible for music generation than Wave sounds. Wave files cannot be manipulated to the same degree that MIDI sounds can.

Drivers

Drivers are small pieces of software that allow programs such as Music Ace 2 to communicate with devices such as your sound card or your external MIDI device.

More information. . .

Step 1. Before You Begin

Before installing this product, please perform the following pre-installation steps.

<u>Check the minimum system requirements for Music Ace 2</u> <u>Register Music Ace 2</u>

Go on to Step 2 {ewc rhgbtn32.dll, BlueSkyHelpButton, g<CHICLET.BMP<JumpID(`Installing_Music_Ace_2')<<1}

System Requirements

Please check your computer system to see that it meets the following minimum system requirements:

- 486 66 MHz. or better processor
- 8 MB of RAM
- 640 x 480 256-color Super VGA video
- 24 MB of free hard disk space
- MPC-compatible sound card or General MIDI capability
- CD-ROM drive

Registration

During the installation process, you will be prompted for your name and your registration number. The registration number can be found on the product registration card. This card is very important! Please detach the bottom half of the card and send it to us, and keep the top half for your records. We recommend that you copy the registration number into the space provided on the inside cover of your "Installation and Troubleshooting Guide" and on the inside cover of your "Music Ace 2 User's Guide". If you ever need to reinstall Music Ace 2, you will need the registration number.

Step 2. Installing Music Ace 2

- 1. Insert the Music Ace 2 CD-ROM into the CD-ROM drive.
- 2. For Windows 3.1 users: From the Program Manager File Menu, choose RUN. Type 'X:\setup' in the command line, where 'X' is the volume designator for your CD-ROM drive. Click OK to begin the installation. Skip to step 10.
- 3. For Windows 95/98/NT users: Windows will likely detect the Music Ace 2 CD when you insert the CD into the CD-ROM drive. A dialog box should appear asking if you would like to install Music Ace 2. Click "Yes," and skip to step 8. If this dialog box does not appear, then perform the following steps.
- 4. Click the START button, go to Settings and choose Control Panel.
- 5. Double-click Add/Remove programs.
- 6. Click the button labeled "Install."
- 7. Click the button labeled "Next.". (Make sure you do not have a disk in the floppy drive).
- 8. Windows should find 'X:\setup.exe', where 'X' is the volume designator for your CD-ROM drive.
- 9. Click the button labeled "Finish."
- 10. Follow the on-screen installation instructions. You will be prompted for your name and your registration number. The registration number can be found on the product registration card.
- 11. Music Ace 2 should launch automatically after installation.

When the installation is complete, start Music Ace 2 by clicking on the START button and selecting Programs, Music Ace 2, and then Music Ace 2 again.

Go on to Step 3 {ewc rhgbtn32.dll, BlueSkyHelpButton, g<CHICLET.BMP<JumpID(`Configuring_Sound')<<1}

Step 3. Configuring Sound for Music Ace 2

Music Ace 2 will attempt to configure sound for its use. The program assumes that you do not have an external MIDI keyboard, so it will make use of your computer's internal sound card by default. You should only need to configure your sound for Music Ace 2 when you wish to use an external MIDI keyboard for MIDI input and/or MIDI output, or if Music Ace 2 encounters problems with the initial setup.

All of the sound configuration settings for Music Ace 2 are accessed from the Music Ace 2 <u>Preferences Screen</u>. The Preferences screen can be reached from the main menu (the amphitheater screen) by pressing the "Preferences" button in the upper right-hand corner.

Music Ace 2 makes use of two different kinds of sound generation: WAVE sound and MIDI sound. WAVE sound is pre-recorded, digitized sound, such as short sound effects and Maestro Max' voice. MIDI sound is created as needed by a sound card or external MIDI keyboard from instructions that it receives from a program such as Music Ace 2 (the music sung by Max' choir of singing notes in Music Ace 2 is an example of MIDI sound).

There are both WAVE and MIDI devices located on your computer's sound card, and each device must be configured separately in Music Ace 2. Each device has one or more "drivers" associated with it. Drivers are small pieces of software that act as a liaison between the sound device and an application program such as Music Ace 2. Configuring each of the sound devices involves choosing the proper driver for Music Ace 2 to use.

Choosing a MIDI Input Driver Choosing a Wave Output Driver Choosing a MIDI Output Driver

Go on to Step 4 {ewc rhgbtn32.dll, BlueSkyHelpButton, g<CHICLET.BMP<JumpID(`Calibrating_Latency_in_Music_Ace_2')<<1}

Choosing a MIDI Input Driver

If you wish to use a MIDI keyboard for MIDI input in Music Ace 2, then you will need to tell Music Ace 2 to use the MIDI input driver.

To reach the MIDI Input screen, go to the Preferences screen and click the button labeled "MIDI Input."

MIDI Input Driver			
Creative Sound B	Naster Midi In 🛛 🔾		
None	3		
<u>o</u> k	<u>C</u> ancel		
<u>R</u> estore Defaults			

An example of a MIDI Input Driver screen.

NOTE: the screen that you see on your computer may have different choices.

There will typically be only two choices available on the MIDI Input Driver screen. There will be an option for a MIDI Input driver whose name is specific to your sound card (in this example it is "Creative Sound Blaster MIDI In"). There will also be an option for no MIDI Input (this is the default). (NOTE: If a MIDI Input driver is not available to you, that means that the driver is not currently installed on your machine or your sound card is not capable of MIDI input. Please refer to the 'Sound Device Drivers' section regarding installing drivers).

To enable MIDI Input, select the MIDI Input driver and then test the Input by playing your external keyboard; the corresponding keys of the on-screen piano will light up.

Save your selection by clicking the "OK" button. Restore the Music Ace 2 initial settings by clicking the "Restore Defaults" button.

NOTE: If some notes do not seem to work, remember that the on-screen keyboard for Music Ace 2 is only four octaves long. Many keyboards have more than four octaves, so you might be playing out of the range of Music Ace 2.

Introduction to Software Synthesizers and the Latency Issue

The Music Ace 2 MIDI Output Screen (found in the <u>preference screen</u>) lists the MIDI output drivers available on your computer. Depending on which sound card and which drivers you have installed in your system, some of these drivers may be hardware wavetable synthesizers (such as the SoundBlaster AWE 64) and some may be software wavetable synthesizers (such as the Yamaha SXG50). Wavetable synthesizers produce high-quality, realistic instrument sounds by piecing together short digital recordings of real instruments. Hardware wavetable synthesizers use special digital electronics on the sound card to synthesize music from the recordings. Software wavetable drivers synthesize music from digital recordings on your hard drive using your computer's CPU.

Software wavetable drivers have the advantage of producing the same high quality music via non-wavetable sound cards as the more expensive hardware wavetable sound cards. Due to their intensive CPU usage, however, they have two major disadvantages: 1) they subtract from your computer's available processing power to perform other tasks and 2) the synthesized sound usually has a noticeable latency, on the order of a half-second.

This latency, or delay, means that when Music Ace 2 plays an instrument sound, the sound is produced a fraction of a second after it was intended. A fraction of a second might seem insignificant. However, in music, timing requirements are very precise. The graphics and sound will be not be synchronized and many of the activities in Music Ace 2 will not be accurately synchronized.

Here are the most common software wavetable drivers:

Yamaha SXG50 Microsoft GS Wavetable SW Synth Roland Virtual Sound Canvas

If you have a hardware wavetable synthesizer driver available, you should use that. If not, you may also have an FM synthesis driver available (sometimes called "OPL" synthesis). FM synthesis drivers do not have the latency or CPU usage problems software wavetable drivers have, but their sound quality is usually not as good as hardware wavetable synthesizers. If you are satisfied with the sound quality of your FM driver, you might decide to use that driver.

If you have a software synthesis driver, and you wish to use it in spite of its latency, Music Ace 2 is capable of compensating for the latency. If Music Ace 2 knows the latency of your driver, it can adjust the timing of the animation such that the animation and sound become re-synchronized.

Since software wavetable MIDI output drivers use a wave output driver to produce sound, the wave driver being used will often experience a similar latency. Music Ace 2 will adjust the timing of the animation to the wave latency also.

In order to compensate for the latency that may exist in the sound production system of your computer, Music Ace 2 delays graphics to synchronize them with the sound. To know exactly how much to delay the graphics, Music Ace 2 needs to know the exact extent of the latency in the sound on your computer. You will need to help Music Ace 2 determine this information by completing a quick exercise or two:

Calibrate Music Ace 2 for the MIDI Latency Calibrate Music Ace 2 for the Wave Latency

MIDI Sound Latency Calibration

Click on MIDI Output Driver. Now press the Calibrate Latency button. (If this button is grayed out, this means you need not calibrate latency. If the instruments sound fine to you, then press OK. Or, you may select a different output driver. Then the Calibrate Latency button may become active). Follow the directions for calibrating latency. You should see (and hear) a bouncing ball. In the white box is a slider control. Using your mouse, drag the slider slowly to the right until the ball bounce is synchronized with the click. This may take a little experimenting to get exactly right. If the bouncing ball makes a sound, then the click and the ball bounce sound should sound as one when the latency is calibrated correctly. If you cannot hear the ball bouncing, you will need to watch the ball and line up the bounce with the click. Select OK when you are done.

Music Ace 2 now shows you a MIDI song that allows you to see whether the graphics line up with the sound. Watch the notes as they sing. Their mouths should open in synch with the sound. If this looks right to you, then you are done with the MIDI latency calibration. Press Yes, then press OK, and go on to WAVE latency. If the notes' mouths open either too early or too late, then you need to go back and fine tune the latency calibration. Press No. Music Ace 2 lets you fine tune the latency and then check it against the MIDI song once more. You may fine tune the latency as many times as you wish until you get it just right. Take your time. Your patience will pay off when you are using Music Ace 2.

Wave Sound Latency Calibration

Now you are ready to work on the WAVE latency calibration. In the Preferences screen, click on Wave Driver. Calibrating the latency for the WAVE driver is exactly the same procedure as with the <u>MIDI Output Driver</u>. Follow exactly the same steps. Note that although the test song sounds similar, the WAVE song is generated using a WAVE file (i.e. a digital recording of the song, whereas the MIDI song is generated by a MIDI file). When you have successfully calibrated Music Ace 2 for MIDI and WAVE latency, you are ready to work on lessons and games. Although it is rare, should the MIDI or WAVE sound fall out of synch while you are using Music Ace 2, you can always go back to the <u>preference screen</u> and fine tune the latency calibration.

In Music Ace 2, when you click on an instrument, drag a note, or perform some similar activity, there will still be a certain amount of latency - Music Ace 2 cannot compensate for this. Music Ace 2 can only compensate for music and wave sounds that Music Ace 2 produces itself.

One final note. When calibrating Music Ace 2 for latency, you should hear a reference sound each time the ball bounces. (See above). On some computers you may not hear this sound. This is because your computer is unable to provide Music Ace 2 with a non-latent MIDI sound. Most computers (even those with software synthesizers) are able to provide a reference, non-latent MIDI sound. You might wonder: if this is the case, why not just use that MIDI driver and eliminate the need for calibrating latency altogether. Often the reference MIDI sound driver has very poor sound quality. So it is useful for calibrating latency, but not desirable for listening to the fully textured musical arrangements in Music Ace 2's Lessons and Games. If your computer does not have a reference MIDI sound driver, you will have to calibrate the latency using just the ball-bounce graphic. This can be slightly more difficult, so be sure to watch closely during the test song to make sure you have calibrated the latency accurately.

Animation is too slow or the colors appear strange

Solution:

- Be sure your video is configured for 256-colors. Other configurations can result in slower video performance or incorrect mapping of the color palette.
- Close other applications that are running and try again. DOS applications can be especially large users of computer cycles.

I do not hear Max speaking

Solution:

The Wave device on your computer's sound card produces Max' voice, so here are a couple of things to check:

- Make sure your speakers or headphones are connected correctly and the volume control on your speakers is turned up.
- Check the Volume on your wave device:

Click Start – Programs – Accessories – Multimedia -- Volume Control. Here you will be presented with several volume sliders. One of the sliders should be labeled 'Wave.' Check to make sure that the volume is high enough and that the 'mute' option is not checked.

If you do not see a slider labeled 'Wave,' then go to the Options menu and choose 'Properties.' In the following dialog window, there is an area labeled 'Show the following volume controls.' In this box, make sure that "Wave" is selected.

NOTE: All machines that have Windows 95 or above should have the Volume Control program. If you find that it is not there, you need to install it from your System CD.

- If the Volume is set at an appropriate level, then start Music Ace 2 and go to the <u>Preferences screen</u>. Click "Wave Driver." Try the different options here and test Max' voice. If you hear Max speak, then you should be ready to go!
- If you do not have any options available to you other than "No Wave Output", then the proper Wave driver is probably not
 installed. Please refer to the section entitled "Sound Device Drivers."

I do not hear any music when the notes sing, or the instruments do not sound when I click on them on the MIDI Output screen

Solution:

The sound that is produced by the notes in Music Ace 2 is performed by a MIDI device, either from an internal sound card or an external device such as a MIDI keyboard.

Diagnostic procedure depends upon whether you are using your sound card or an external MIDI instrument to generate MIDI sound. Please refer to the appropriate section below.

If you are using your computer's internal sound card to generate MIDI sound, click <u>here</u>. If you are using a MIDI keyboard to generate MIDI sound, click <u>here</u>.

Using Your Computer's Internal Sound Card to Generate MIDI Sound

- Make sure your speakers or headphones are connected correctly and the volume control on your speakers is turned up.
- Check the Volume on your MIDI device:

Click Start—Programs—Accessories—Multimedia—Volume Control. Here you will be presented with several volume sliders. One of the sliders has a label such as 'MIDI' or "Synthesizer;' what is listed is dependent on your machine. Check to make sure that the volume is high enough and that the 'mute' option is not checked.

If you do not see a slider related to your MIDI device, then go to the Options menu and choose 'Properties.' In the following dialog window, there is an area labeled 'Show the following volume controls;' in this box, make sure that 'MIDI' or 'Synth' (depending on your machine) is selected. In this example, the volume slider we are interested in is "MIDI."

NOTE: All machines that have Windows 95 or above should have the Volume Control program. If you find that it is not there, you need to install it from your System CD.

If the Volume is set at an appropriate level, then start Music Ace 2 and go to the <u>Preferences screen</u>. Click "MIDI Output Driver." See the section entitled "<u>Choosing a MIDI Output Driver</u>" for information on choosing the appropriate MIDI Output Driver.

- If you do not have any options available to you other than "No MIDI Output" and "MIDI Mapper," then the proper MIDI
 driver is probably not installed. Please refer to the section entitled "Sound Device Drivers."
- If you still do not hear MIDI sound, then you should try playing a MIDI file through Windows. Exit Music Ace 2. Double click "My Computer." Locate the icon for your CD-ROM drive, right-click it, and choose "Explore." On the CD-ROM, open the folder called "SoundTst," then open the folder called "Midi." Double-click on the file called "Saints.mid." Media Player will open. Once it loads, click the Play button, which is located at the bottom left hand corner of the Media Player Window.

If you hear the MIDI file, please call <u>technical support</u>. This may mean that there is something malfunctioning in Music Ace 2.

If you do not hear the MIDI file, there is probably some problem with your MIDI driver. Please refer to the section entitled "Sound Device Drivers."

Using a MIDI Keyboard to Generate MIDI Sound

- Make sure your MIDI keyboard is turned on and that the volume is turned up.
- If the Volume is set at an appropriate level, then launch Music Ace 2 and go to the <u>Preferences screen</u>. Click "MIDI Output Driver." There should be a driver that will route MIDI information out of your computer to your MIDI keyboard. The exact name of the driver is dependent upon your machine, but here is a short list of some words or terms that you might see contained in the name of an external MIDI device driver:
 - "external"
 - "MIDI out"
 - "external MIDI keyboard"
 - "MPU-401"
- Try this option and test it by clicking on the keys of the on-screen piano or on the other instruments. Verify that your MIDI keyboard is producing the sound.
- If you do not have an option available to you that contains any of the words or terms listed above, then the proper MIDI
 driver is probably not installed. Please refer to the section entitled "Sound Device Drivers."
- If you have selected the proper MIDI driver but still do not hear sounds being produced by your keyboard, try swapping your MIDI cables. The "IN" cable from the computer should be connected to the "OUT" port on your keyboard, and the "OUT" cable from the computer should be connected to the "IN" port on your keyboard.
- If you still do not hear MIDI sound, then you should try playing a MIDI file through Windows. Exit Music Ace 2. Double click "My Computer." Locate the icon for your CD-ROM drive, right-click it, and choose "Explore." On the CD-ROM, open the folder called "SoundTst," then open the folder called "Midi." Double-click on the file called "Saints.mid." Media Player will open. Once it loads, click the Play button, which is located at the bottom left hand corner of the Media Player Window.

If you hear the MIDI file, please call technical support. This may mean that there is something malfunctioning in Music Ace 2.

If you do not hear the MIDI file, there is probably some problem with your MIDI driver. Please refer to the section entitled "<u>Sound</u> <u>Device Drivers</u>."

I do not hear any sound at all. (No voice and no music)

Solution:

- Be sure your speakers or headphones are connected correctly and the volume control on your speakers is turned up.
- Be sure your sound card volume control (located on the back of the computer) is turned up high enough.

Introduction to Computer Sound

This section is intended to provide an overview of the types of sound generation hardware and software available on computers. Understanding the ideas in this section will help you follow the procedures described in later sections.

<u>Types of Computer-generated Sound</u> <u>Sound Hardware</u> <u>Sound Device Drivers</u>

Types of Computer Generated Sound

Computers can typically generate two basic kinds of sound: Wave sound and MIDI sound. Most sound cards are capable of generating both Wave and MIDI sound. Music Ace 2 uses both Wave and MIDI sound.

Music Ace 2 uses both MIDI (music) and digitized sound (Wave sound). The music is generated by your sound card or by an external MIDI device. Sound effects are generated using the digital-to-analog (digitized sound) capability of your sound card.

Wave Sound MIDI Sound

Sound Hardware

Computers use two basic types of hardware devices to generate sound: Sound cards and external MIDI instruments. Sound cards are installed internally in the computer and are connected to external speakers or headphones. Sound cards generally support both Wave and MIDI sounds. MIDI instruments are connected to an internal MIDI interface card or to a sound card with a MIDI interface port (connector). MIDI instruments provide MIDI sound only, and do not support Wave sound (although many MIDI keyboards can emulate special Wave sound effects).

Music Ace 2 supports Multimedia Personal Computer (MPC) compatible sound cards and MIDI interfaces (internal MIDI cards or sound card MIDI ports). Music Ace 2 will also work with a combination of a sound card and an external MIDI device. For example, you may use an external MIDI device for music sounds and a sound card for Wave sound.

Sound Device Drivers

Drivers are small pieces of software that allow programs such as Music Ace 2 to communicate with devices such as your sound card or your external MIDI device. In order for your particular sound hardware to operate properly with your computer, appropriate device drivers must be installed on your system. The manufacturer of your computer or sound hardware provides these sound device drivers. If you add a new sound device, you must install an appropriate device driver that is provided with the sound device. Music Ace 2 assumes that the necessary device drivers are installed and configured correctly on your computer. If this is not the case, you will need to refer to the manuals provided with your computer, your sound card or your MIDI keyboard to install and set up the necessary device driver(s).

Most Sound card manufacturers also offer downloadable drivers from their Web sites. If you are having problems configuring your sound card for use with Music Ace 2, you might try downloading the newest drivers from the manufacturer.

Setting Up Music Ace 2 on a Windows System Overview

This section describes the procedure for setting up Music Ace 2 on a Windows system.

Step 1. Before You Begin

- Step 2. Installing Music Ace 2
- Step 3. Configuring Sound for Music Ace 2
- Step 4. Calibrating Latency in Music Ace 2
- Step 5. Solving Common Problems

Choosing a MIDI Output Driver

A MIDI device (i.e. an internal sound card or MIDI keyboard) produces the music heard from Max' choir of singing notes in Music Ace 2. To reach the MIDI Output Driver screen, click on the button labeled "MIDI Output" from the <u>Preferences screen</u>. On the MIDI Output Driver screen, the choices that are presented to you are the MIDI drivers installed on your machine. Ideally, you should have four or five options from which to choose.

MIDI Output Driver				
		I	.atency (ms)	
MIDI Mapper		Ĩ	U	
Creative Sound Blaster Nidi Out		Ξ	?	
SoundBlaster		Ξ	0	
SB AWE32/64 MIDI Synth		Ξ	?	
None		Ξ		
OK	Cancel			
Calibrate Latency	<u>R</u> estore Defaults			

An example of a MIDI Output Driver Screen.

Note: The screen that you see on your computer may have different choices.

The MIDI Mapper option will use the Windows MIDI settings. On Windows 3.1 these settings can be made in the MIDI Mapper Control Panel. On Windows 95/98/NT these settings can be made in the Multimedia Control Panel under the MIDI tab.

- One choice is for routing MIDI information out to an external MIDI keyboard. This option will likely contain one of the following words or phrases: 'MPU-401,' 'External keyboard,' or 'MIDI Out.' (In the above example, "Creative Sound Blaster MIDI Out") Choose this option to use a MIDI keyboard for MIDI output.
- One or two choices refer to an 'internal' device, namely the sound card installed on you machine. (In the above example it is "SoundBlaster and SB AWE32/64 MIDI Synth.")
- None (MIDI output is disabled). Harmonic Vision Technical Support may use this option to diagnose and remedy
 problems with Music Ace 2.

Almost all sound cards have tone generators built into the card. These range in quality from FM (Frequency Modulated) sound to Wave Table sound (not to be confused with Wave sound). Normally, sound cards will be able to produce sound in two ways: through FM Synthesis and in some other way that is specific to the card.

You can test each driver by choosing an option and then clicking on either the piano keyboard or on the instruments.

Save your selection by clicking the "OK" button. Restore Music Ace 2's initial settings by clicking the "Restore Defaults" button.

If you do not have any options available to you other than "No MIDI Output" and "MIDI Mapper," then the proper MIDI driver is probably not installed. Please refer to the section entitled "Sound Device Drivers."

If you encounter any difficulties testing your internal device, (e.g. you can not hear MIDI sounds or you do not think that you have the internal MIDI option available) please refer to the section entitled "Solving Common Problems."

NOTE about Wavetable sound:

Choosing a Wave Output Driver

Maestro Max' voice and other sound effects are played back through a WAVE device (not to be confused with 'Wave Table Synthesis.')

To reach the Wave Driver screen, go to the Preferences screen and click the button labeled "WAVE."

You will typically be presented with three or more options for a Wave Driver. Here is a sampling of what you might see:

- Primary sound driver
- A driver specific to your sound card. (In this example, "SoundBlaster.")
- One or more options for "DirectSound" drivers. These will only be available if you have Directx 3 or higher installed on your machine. You can download the latest version of Directx from Microsoft's Web site at www.microsoft.com. Downloading Directx is not necessary to run Music Ace 2, however.
- None: This option will disable Wave sound including Maestro Max' voice.

Typically choosing "Primary Sound Driver" will work successfully with Music Ace 2. If you do have the DirectSound option, it might yield a better quality sound.

Make your selection by clicking one of the checkboxes. Test your selection by clicking on the button under Maestro Max labeled "Listen to Max."

Special sound effects and Maestro Max' voice are examples of digitized sound. Music Ace 2 gives you the opportunity to select the quality of these sounds. This can be configured in Music Ace 2 by clicking "Preferences" and then clicking "Digitized Sound." You will be presented with two options: 8-bit audio and 16-bit audio. The 16-bit option yields better quality, but might hinder the performance of Music Ace 2. The 8-bit option will result in lower quality sound, but will yield better performance of Music Ace 2. You can experiment with this option to see which one works better for you.

Save your selection by clicking the "OK" button. Restore Music Ace 2's initial settings by clicking the "Restore Defaults" button.

If you are having difficulties with Wave sounds in Music Ace 2, please refer to the section entitled 'Solving Common Problems.'

Using an External MIDI Keyboard

All settings for external MIDI keyboards can be configured in Music Ace 2 by choosing Preferences from the Main Menu (the amphitheater screen). To configure MIDI output, press "MIDI Output Driver," and to configure MIDI input, press "MIDI Input Driver."

Step 4. Calibrating Latency in Music Ace 2

Introduction to Software Synthesizers and the Latency Issue MIDI Sound Latency Calibration Wave Sound Latency Calibration

Go on to Step 5 {ewc rhgbtn32.dll, BlueSkyHelpButton, g<CHICLET.BMP<JumpID(`Animation_is_too_slow_or_the_colors_appear_strange')<<1}

Step 5. Solving Common Problems

This section provides a list of potential problems and suggested solutions for users of Windows systems. If you have a Macintosh computer, please refer to the section titled "Setting Up Music Ace 2 on a Macintosh System."

If you have a problem installing or using Music Ace 2, please read through this entire Installation and Troubleshooting Guide. If you still cannot solve the problem, please visit our web sit at www.harmonicvision.com, send us email at techsupport@harmonicvision.com, or call our Technical support department between 8am and 5pm central time, Monday through Friday at (847) 467-3250.

Animation is slow or the colors appear strange.

I do not hear Max speaking.

Do not hear any music when the notes sing, or the instruments do not sound when I click on them on the MIDI Output screen. Do not hear any sound at all. (No voice and no music)

Technical Support Information

Music Ace 2 is designed to be easy to install and use. However, if you run into a problem installing or using this product, first make sure you have thoroughly read through this installation and troubleshooting guide. If you are unable to solve the problem, please call Harmonic Vision's Technical Support Department, between the hours of 8:00 am to 5:00 p.m. CST, at (847) 467-3250, visit our Web site at www.harmonicvision.com or send e-mail to techsupport@harmonicvision.com.

Before you call, please have the following information available:

- 1. Your product registration number.
- 2. The type of computer you are using, including the brand name, model, and processor speed.
- 3. The type of sound card or MIDI device you are using.
- 4. A specific description of the problem.

If possible, please call from a telephone located near your computer.

Note about Wavetable Sound

Some sound cards do not allow for one of the MIDI sound generation options to work simultaneously with the Wave sound. In this case, choosing the 'FM Synthesis' option should solve the problem. (To read more, see the section entitled "<u>Solving</u> <u>Common Problems</u>.")

Preferences Screen

The Preferences screen can be accessed from the amphitheater screen by pressing the "Preferences" button on the upper righthand corner of the main menu screen.

The Preferences Window

{ewl RoboEx32.dll, WinHelp2000, }