

# VirtuosoEar – A Companion Software to the book titled “A Totally New Approach to Ear Training based on the 12 Note Solfege”

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*Basic Edition*

**Getting Started Guide**

Pianistica



## *Caution*

This software is for Advanced MIDI Users only. We do not like this statement, but unfortunately at this point of time, we can not make this software for everyone. It requires either a GM (General MIDI) compliant Hardware MIDI Synthesizer or a low latency Software Synthesizer to operate correctly. The default (built-in) Microsoft GS Software Synthesizer is not adequate due to its latency. You can try our evaluation copy with this synthesizer to learn how it operates, but it is not usable in real life since it introduces too much delay. You need to be equipped with a skill to configure whatever your synthesizer to operate with this software. By the way, term “software” and “program” are used interchangeably in this document.

## *Disclaimer*

We have to start with the industry standard disclaimer. We spend a great deal of time making sure that the program does not cause any damage to your computer. However, you are solely responsible to determine the suitability or fitness of the program for your needs. We are not responsible for either direct or indirect damages by using this program. Generally speaking, it is very rare that this type of programs causes any damage to your computer. The program is not designed to collect your data nor change any of the computer settings. Nevertheless, it is you to decide whether the program is suitable for your needs.

## *Introduction*

Thank you very much for your interest in VirtuosoEar.

First of all, we would like to explain the concept behind the product. The VirtuosoEar is based on the technology introduced in our book titled "A Totally New Approach to Ear Training based on the 12 Note Solfege". While the technology "12 Note Mapper" is used to produce lessons in the book, we use the same technology in real time, which means you can actually experience while playing your instruments. This extends your Ear Training sessions into your daily practice routine. This integrated approach makes your learning much more effective. From a certain point of view, this is the software we have really wanted to introduced. Since Windows operating system does not provide a software synthesizer which can be used in real time, we are forced to take a detour. That is precisely we needed to start out with a cautionary statement in the beginning. Good news is that it is very easy to use although the setting is technically involved. If you are a bit shy technically, find someone in your local community. You can download our evaluation copy, which works exactly the same except that you can not save settings. We hope many of you can utilize the software despite its technical complications at this moment. Due to this Windows limitation, we started working on a Mac version of the same software. Apple solved the latecy problem in their OS X operating system. Please check our website for the latest development.

By the way, if you are new to Ear Training, please read a white paper titled "Ear Training for Musicians" available at our website.

Sincerely,

Pianistica Product Development Team

## Let's Begin!

We know that you might want to start using the program right away. We, however, feel strongly that just 10 minutes of your time upfront will save you a great deal of your time. You can actually try the program while reading this. If you are reading this far, we assume that you have already downloaded the program to your machine. If not, you are a careful reader. We like that. Please visit [www.pianistica.com](http://www.pianistica.com) to download the program.

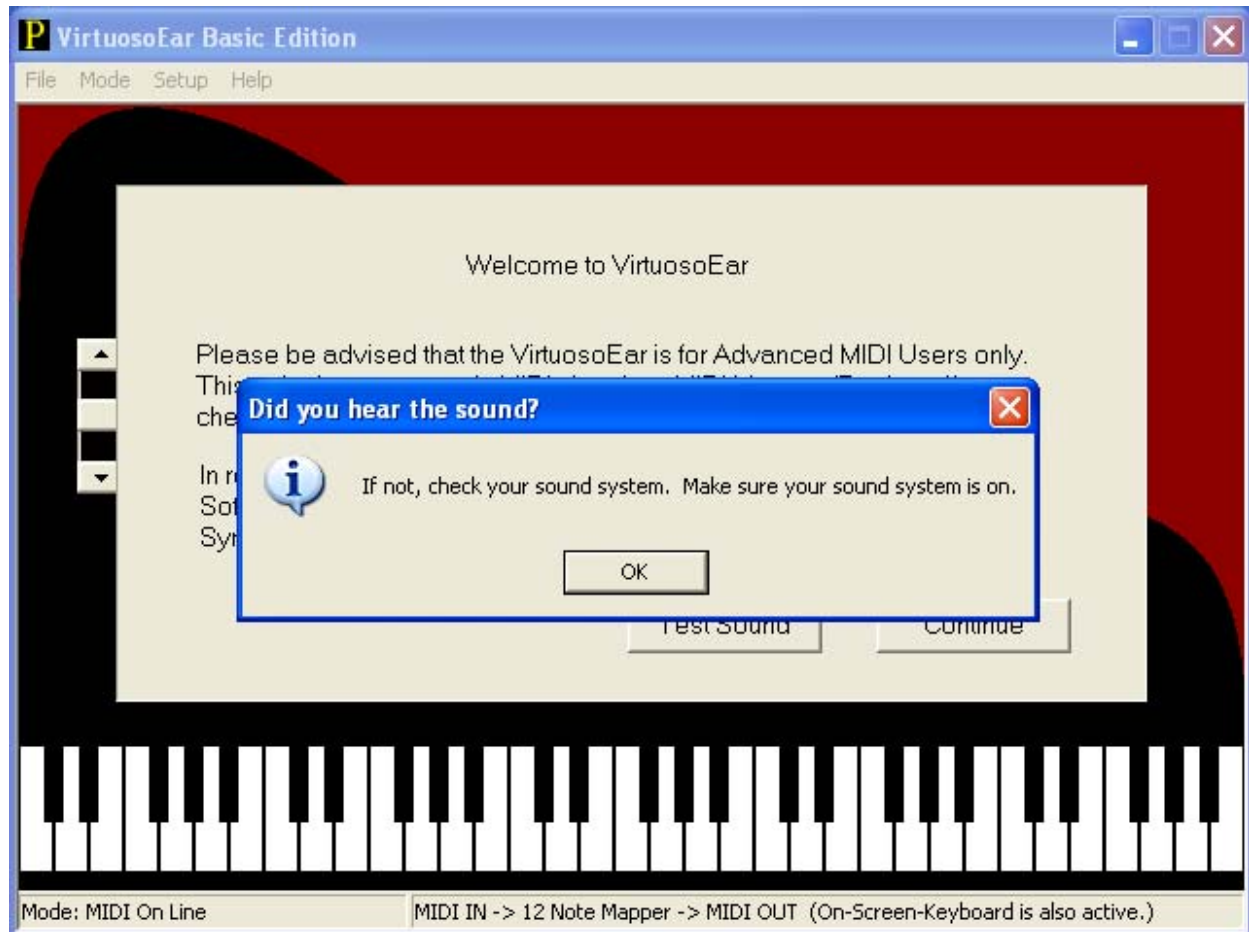
This program is designed to run on any Microsoft Windows computers. Well, Windows 95 and later editions to be precise. The other requirement is a real time (low latency) GM (General MIDI) compliant synthesizer. This is a bit involved. We will talk about it in great details, but let's start the program for now. You can just download the program to your desired location, unzip the contents and simple double clicks on the icon to start. The program does not require Installation. Thus, uninstaltion, either.

Here is an opening screen for the first time:



Warning: You should set your volume to a lower side to be safe. Don't blame us when you blow up your speakers.

Having said that, if you click on “Test Sound”, you should hear something. You will see the following screen after the sound:

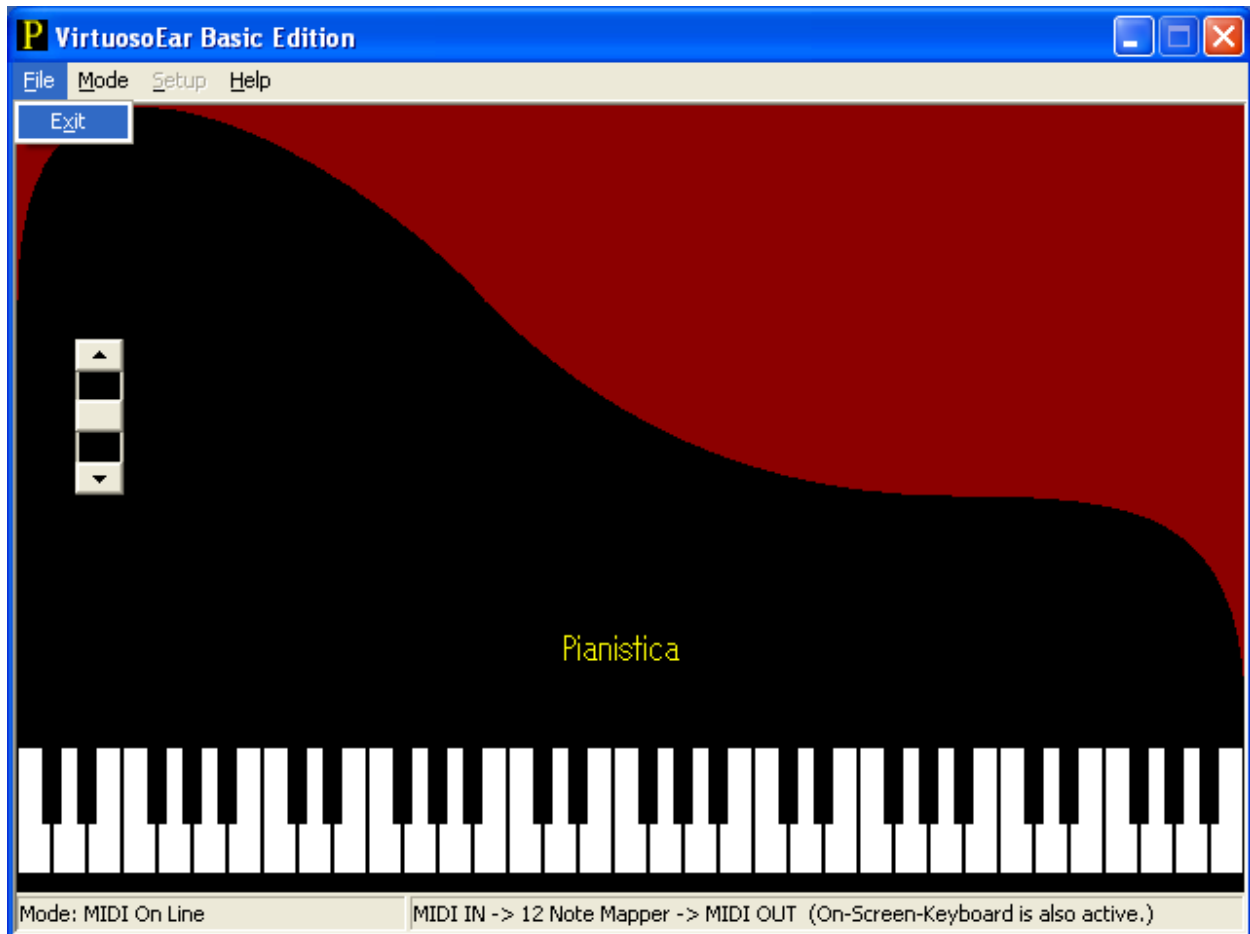


You click on “OK” button. Now, if you did not hear the sound, here is what you can do. First, a simple sanity check. Make sure your sound system attached to your computer is turned on. If not, turn on the system and repeat the process. If this does not resolve the problem, you can click on “Continue” and move onto the section describing Setup. Under MIDI, you can designate your desired MIDI device. We, however, recommend you follow along this Getting Started Guide. Here, we assume you heard the sound. This is actually not the end of the setup process because your default MIDI device, Microsoft GS Wave Table Synthesizer, is not adequate for this application. We use this synthesizer to illustrate the operation of the software first. Then, we customize MIDI setup according to your computer system. If you did not hear the sound, it is most likely that the default device is not this synthesizer. If you use earlier versions of Windows, you likely have to select a different device, too. Majorities of the users, however, should hear the sound. That is the intention of the splash screen.

If you have no sound card installed in your computer, which is rare these days, you will see an error message stating that. The program will terminate if that’s the case. You need to find another computer. It shouldn’t be too difficult. You can run this program pretty much any Windows computer. Outdated

machines are just fine for this program as long as Windows 95 or any later edition is installed except that your MIDI synthesizer needs some special attentions.

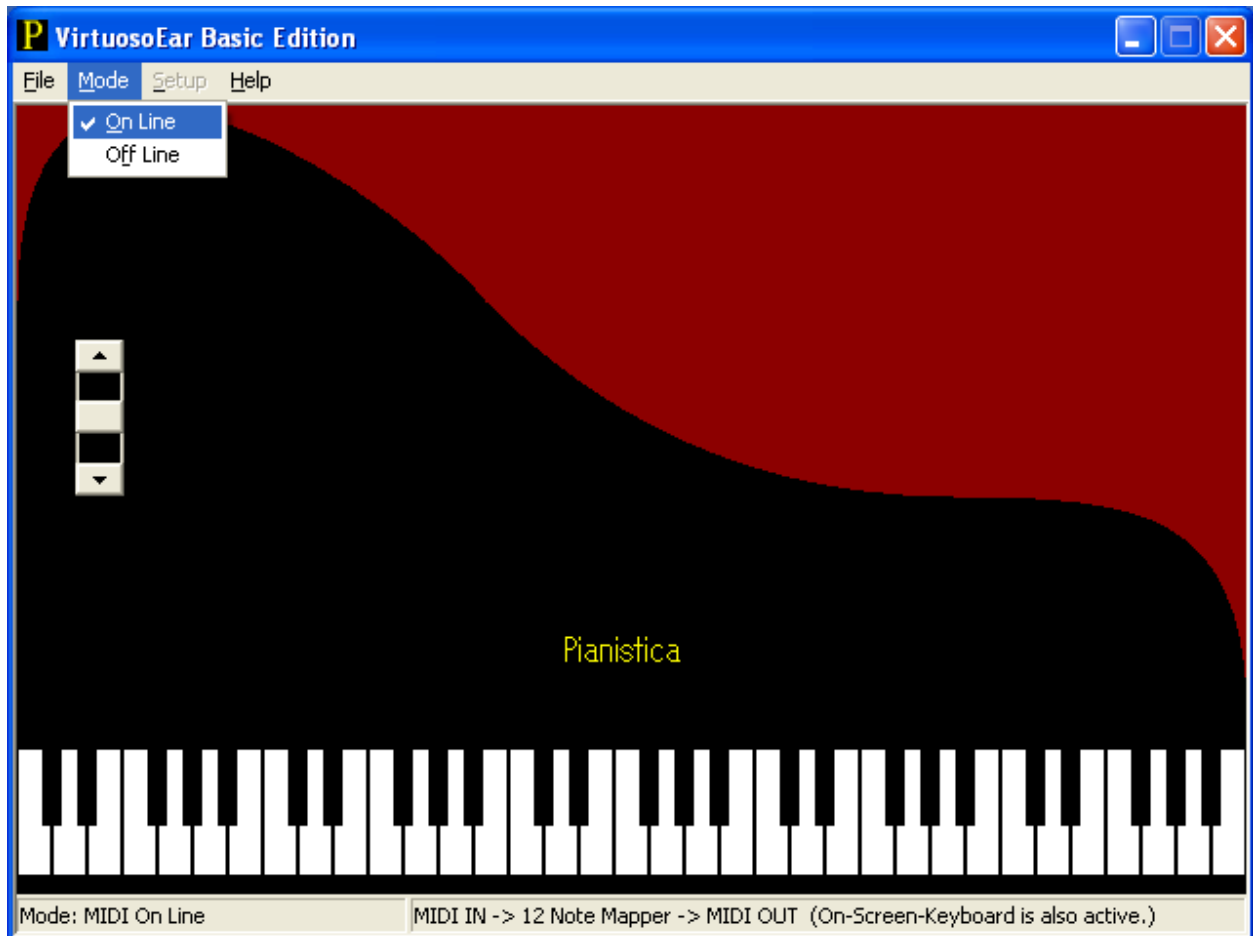
In the following session, we will look at menus and menu structure. The top menu contains File, Mode, Setup and Help as you see in the following pages. We will examine the content of the top menu starting File:



You will see "Exit" menu like any other Windows programs. You can exit the program through this menu or X box in the top right hand corner. There is no difference. Unlike other Windows program, however, there are no "Open" or "Save" menus. Because the program does it for you automatically. Once you exit the program, it saves everything. The next time you start the program, it will bring right back to where you left off. We hope you begin to understand why we said it was important to read the Getting Started Guide first. We know you eventually figure this out, but why not from the beginning. Note: If you use an evaluation copy, the automatic saving feature is disabled. Other than that, everything works exactly the same. By the way, there is a slider on the screen. This is a volume knob for On-Screen-Keyboards since you cannot control the volume otherwise. It does not affect the volume of the incoming MIDI signal.

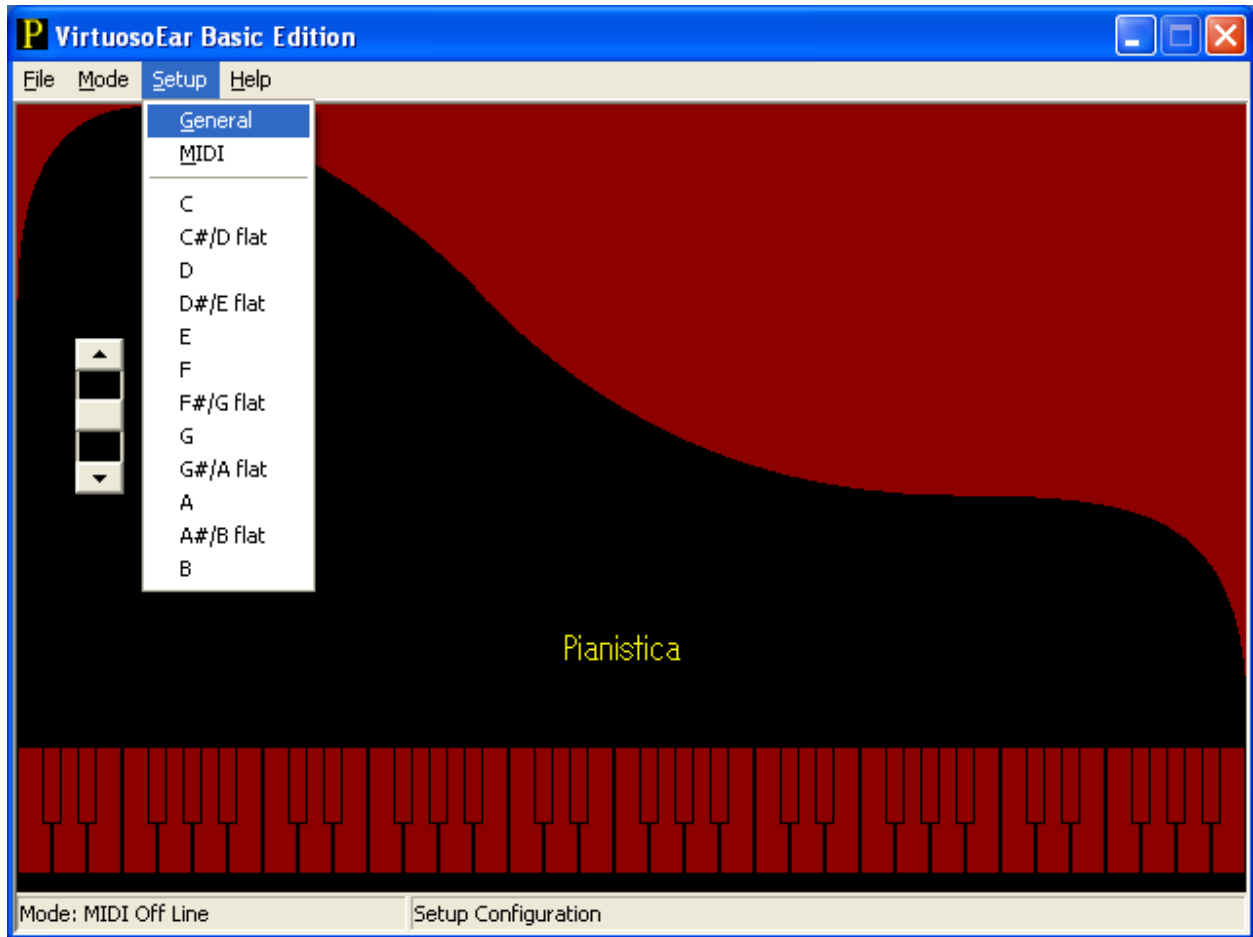
Now, let's move to menu: Mode

As you see, there are two Modes here. The first Mode is "On Line", which turns on both MIDI IN and MIDI OUT devices, and signals from the MIDI IN device is processed and sent to the MIDI OUT device. The second Mode is "Off Line" as you guess. While "Off Line", you can change any settings relevant to the operation of this software. Both MIDI IN and OUT devices are released while in this mode.



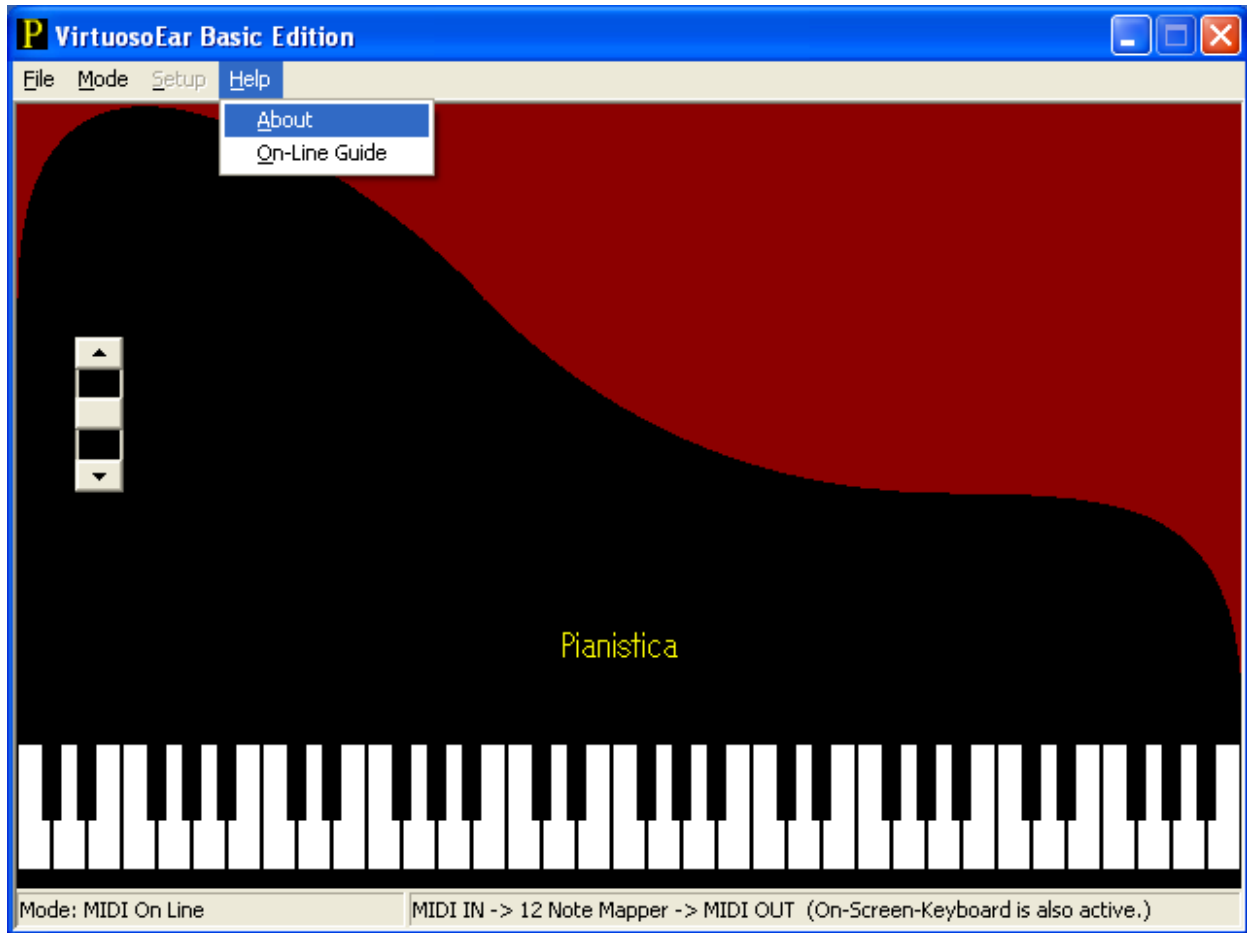
The next item: Setup

There are three categories under Setup as you see in the next page. The first one is General, which contains general settings for the program. The second one is a pair of MIDI settings. You can select desired MIDI IN and OUT devices. And, the last one is 12 Note Mapper Settings starting from C to B. You will find detailed explanations for each category following this top menu section.



The next menu: Help

As you see in the next page, there are two entries under “Help”, i.e. “About” and “On-Line Guide.” “About” tells you the version number of the program. “On-Line Guide” opens your default web browser and displays the main page for the software. If you have a pdf reader installed in your computer, you can directly open the same document in your browser. Just click on “Getting Started Guide”. You need an Internet connection to use this facility.



Now, somewhat you are situated. Let us discuss how the software works. Understanding this is important since we will talk about settings in details.

First of all, MIDI enabled instruments generate MIDI signals according to its specifications. You do not need to know the instruction set. You just need to know what's happening. When the middle C is pressed down, the corresponding signal is coming out from the instrument. Simple enough? Now, any key you press on the instrument is usually sent to the same channel usually designated as Channel 1.

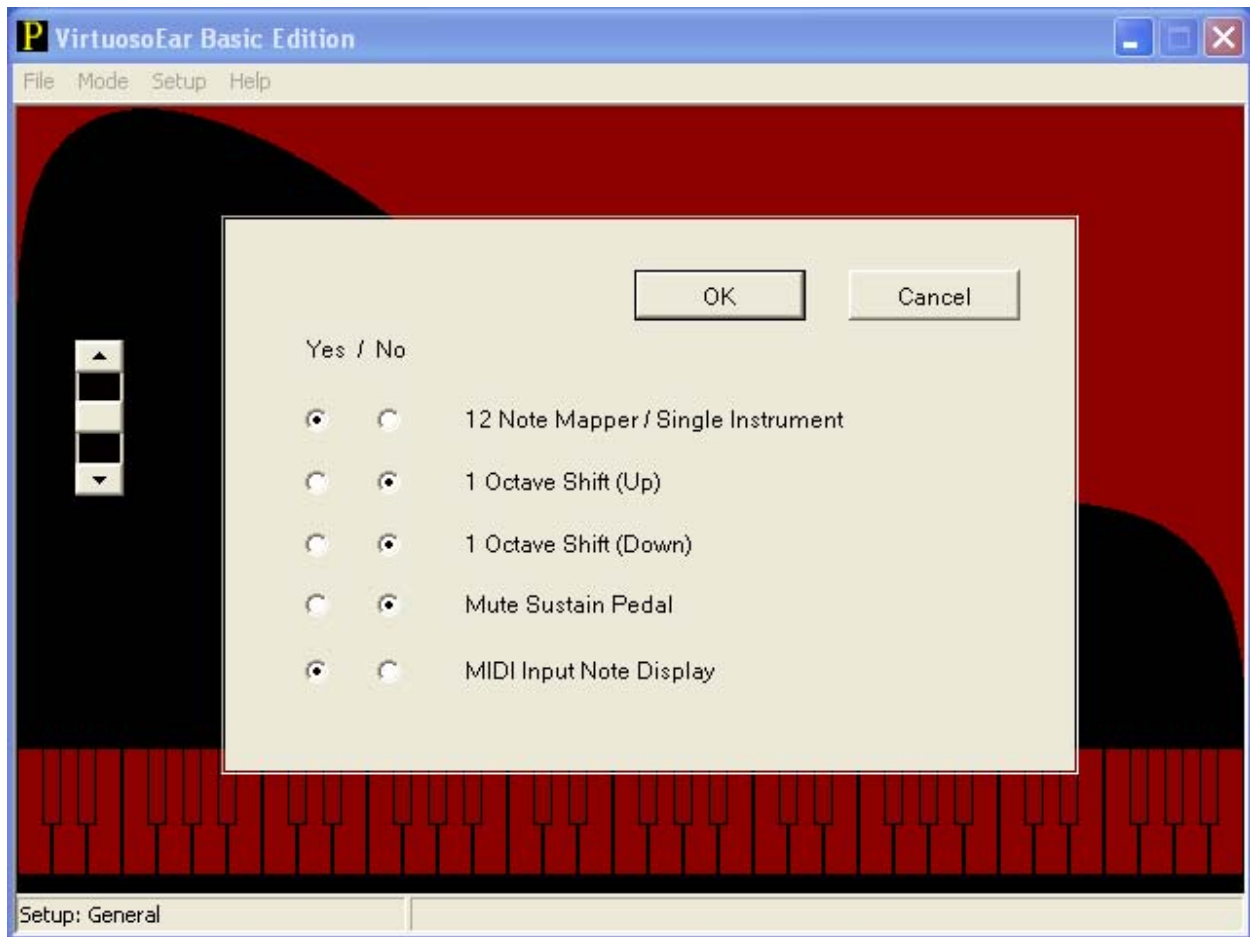
What this software does is to receive an incoming signal assigned as MIDI IN device, check what note is, then send out to the corresponding channel according to the note. Remember there are 12 notes in an octave. For example, C note is assigned as Acoustic Grand and given Channel 1. There are 12 different instruments, designated to 12 different channels. When "On Line" is selected, those 12 channels are set up according to your 12 Note Mapper settings. By the way, each MIDI OUT device can hold up to 16 channels. You can choose your desired MIDI OUT device in MIDI Setup Menu. That is all you need to know as far as this software is concerned. Now, if you are lost, please find a local expert in MIDI.

Note: When we say Channel 1, it is internally designated as 0. Channel 16 is internally designated as 15 or 0F (Hexadecimal). Channel 10 is considered as Drum Channel and not used with this software.

Now, we are ready to talk about the details.

## General Setup

There are five parameters you can choose for your sessions as you see in the image below:



12 Note Mapper / Single Instrument: Yes/No

Yes: The program uses the 12 Note Mapper settings.

No: The program applies the setting for C note to the all 12 notes in an octave.

1 Octave Shift (up): Yes/No

This setting can be useful when you use a bass instrument where it is not easy to distinguish the difference of the sounds in lower frequency range.

Yes: The program shifts all incoming MIDI signals by 1 octave higher.

No: The MIDI IN signals are process as is.

1 Octave Shit (Down): Yes/No

This setting can be useful when you use an instrument in high register where it is not easy to distinguish the difference of the sounds in higher frequency range.

Yes: The program shifts all incoming MIDI signals by 1 octave lower.

No: The MIDI IN signals are process as is.

Mute Sustain Pedal: Yes/No

Sustain Pedal signals are sent to all 12 channels when the 12 Note Mapper is selected above. This could tax a MIDI hardware signal line. Muting Sustain Pedals could alleviate such a condition.

Yes: Sustain Pedal signals are ignored, not sent to the MIDI OUT device.

No: Sustain Pedal signals are sent to all 12 channels.

MIDI Input Note Display: Yes/No

The screen update is one of the slowest parts of the program. If you see sluggishness, you might want to turn it off.

Yes: MIDI input notes are displayed on the screen keyboard.

No: MIDI input notes are NOT displayed on the screen keyboard.

## *MIDI Setup*

Here you can select both MIDI input and output devices. When you open this menu for the first time, you will see blanks. This is normal. The program has no default input device and MIDI Mapper as a default output device. Since MIDI Mapper is not a real device, you see a blank also. MIDI Mapper is functionality existed with XP and earlier versions of Windows. You can select a desired MIDI output device under MIDI Mapper found in Control Panel. This functionality was discontinued from Vista.

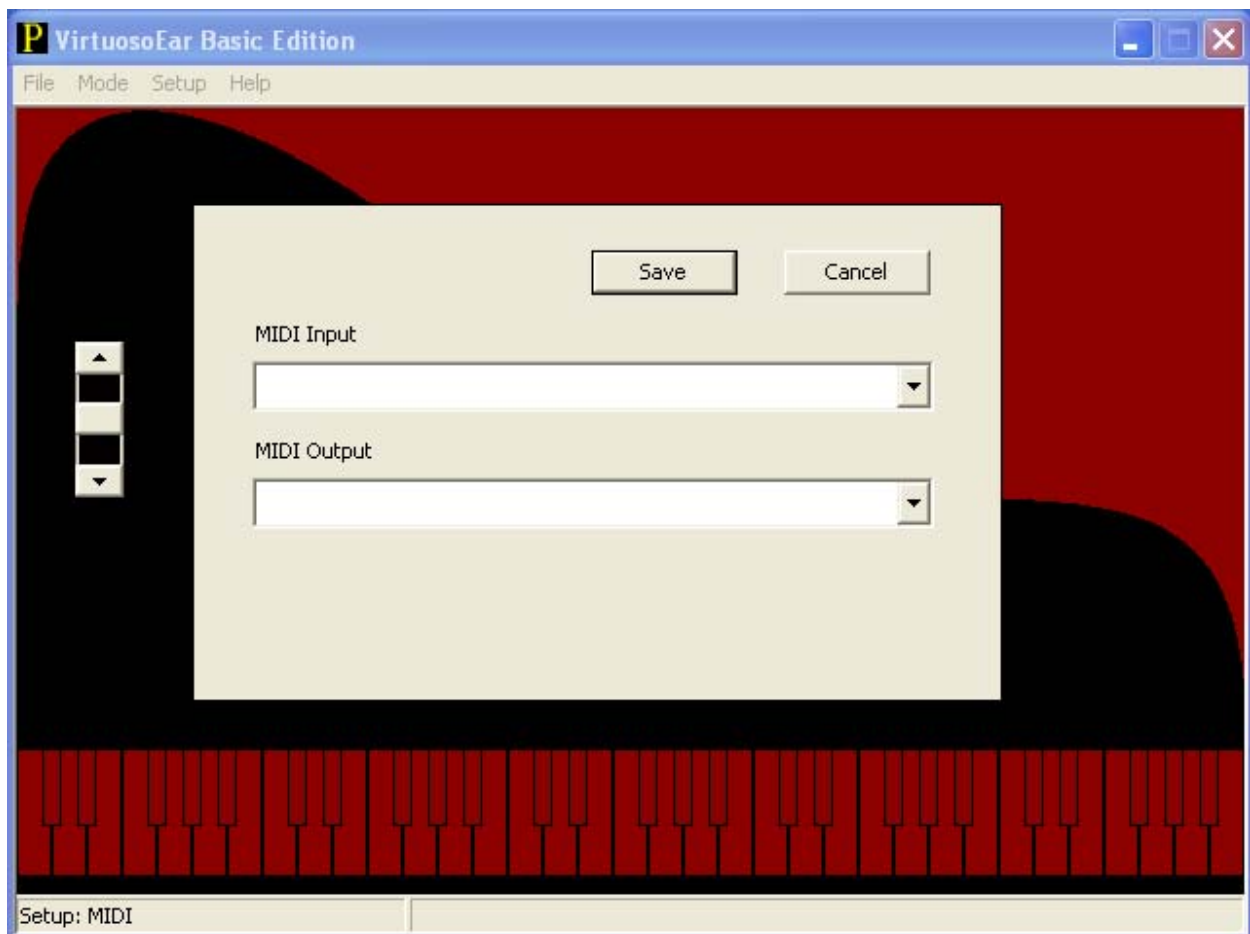
Now, you need to select your desired MIDI input device, such as a MIDI keyboard. Without it, the program does not do its job. On the other hand, MIDI Output can be left as a blank if you use MIDI Mapper to select your desired MIDI output device. Remember, though, that MIDI Mapper does add a tiny bit of delay since it is another layer of software.

Here comes the hard part. You need either Hardware MIDI Synthesizer or low latency Software Synthesizer as a MIDI output device. A Hardware Synthesizer does not have to be a fancy standalone

unit. An old sound card with a MIDI capability will just do fine. In fact, if you have an old desktop computer, we suggest you give a try. It might work just fine for this application. Along the same line, if you have a desktop machine, using a PCI based sound card with a MIDI capability is probably the easiest and cheapest solution. You can often find an old card free. Unfortunately, you need to find someone with hands on experience.

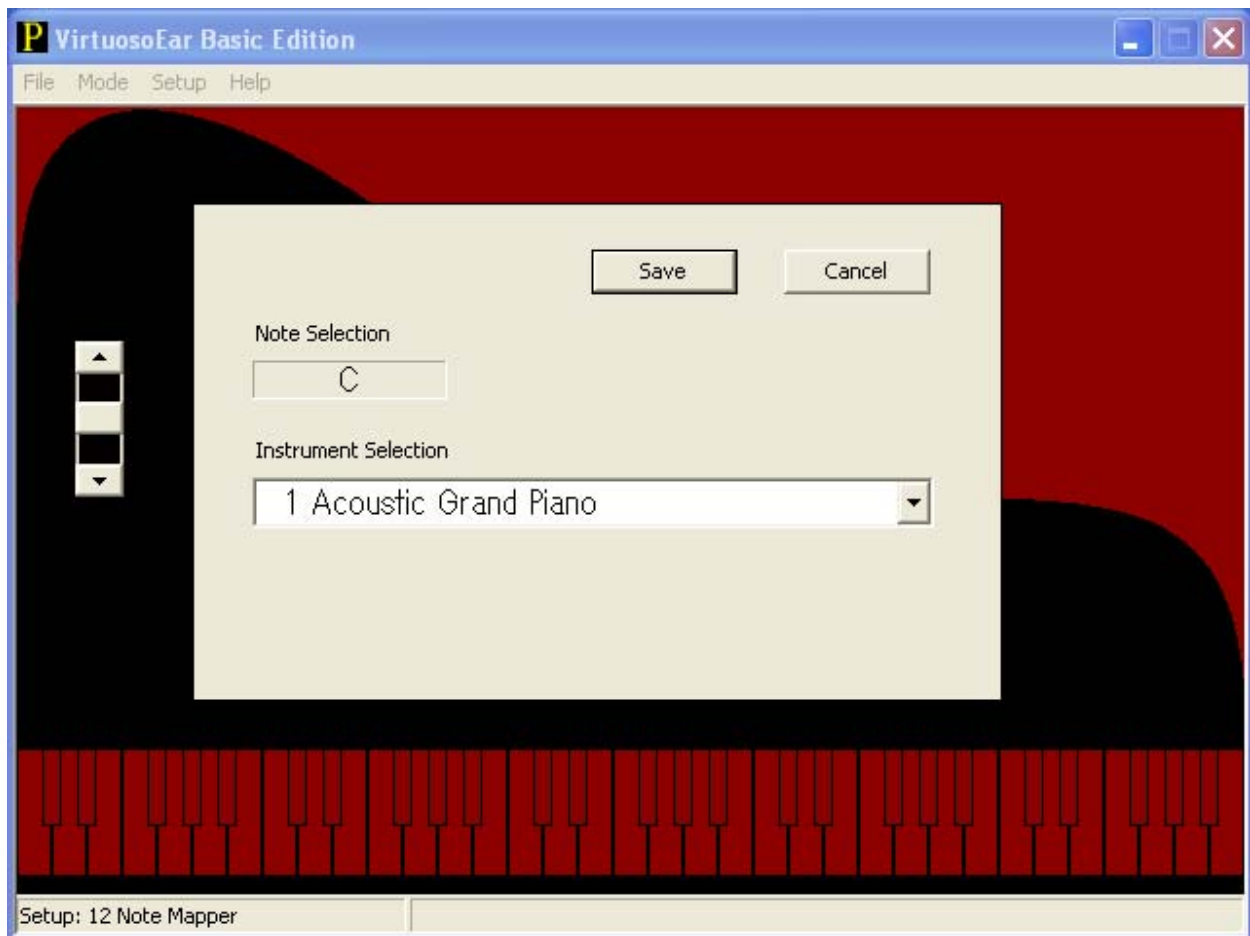
We cannot make a practical suggestion on Software Synthesizers. You should try their demo version to see if it really works. The latency is usually a function of a buffer size and a CPU power requirement. Quite often, you need to tune those parameters to get a desired result. On top of it, you also need to find a software patch cable to connect the software with your software synthesizer, if your synthesizer does not function as a MIDI Output device. One such software is MIDI Yoke NT. This is not our recommendation, by the way. You have to choose one such software.

You can now see why this software is not for everyone at this moment.



## 12 Note Mapper Setup

Here you can customize the 12 Note Mapper to your taste. This was not included initially since any change you make here could cause a conflict with the book we use with this software. However, every person has a different requirement and giving an ability to customize the program is probably a positive thing. There is one point to make. Whatever the instrument you choose for C note will become the instrument for all notes when you select "Single Instrument" over "12 Note Mapper" under General Setup. This Setup might also be useful when you use non-GM (General MIDI) compliant Synthesizer.



Now, you are ready to utilize the program to its full capacity.

## *Known Issues*

We noticed that the program does exhibit two anomalies when you run under VMware. The first one is a bit of screen issue. It is a very minor annoyance. This does not happen in real hardware. Just a tiny part of every key does not display correctly at a startup. The second one is related to a sound card simulation. When you choose 12 Note Mapper under General Setup, certain instruments, such as one used for G#, do not fully sound. This does not happen in real hardware, either. They are really non issues because practically no one will use this program under VMware. They are mentioned here for the sake of completeness and just in case someone tries a demo version under VMware.

## *Maintenance*

As long as you perform regular backups of your computer, there is nothing you need to add to your regular chores. There are, however, a couple of things you might want to know. The program creates two files, namely "VirtuosoEar.ini" and "VirtuosoEar.log". The "VirtuosoEar.ini" stores all of your settings. The "VirtuosoEar.log" is a log file. When something goes wrong, the program tries to save what has happened before exiting.

When you want to re-locate the program, you need to move the "VirtuosoEar.ini" as well. Otherwise, you will see a splash (opening) screen again and need to set all of your Custom settings. You can just erase the "VirtuosoEar.log" file unless you observe anomalies. You can move it together if you want, but the file is overwritten every time you start the program.

If you happen to damage the "VirtuosoEar.ini" file by accident, you can simply delete it. The program will create a new one for you. Yes, you have to set all of your Custom settings again. If you do not want to go through this, you can copy the file and save it in a safe place. If you regularly back up your system, you do this already.

## *System Requirement*

This is a tentative specification, but the program is designed to run on all Microsoft Windows starting Windows 95. The earlier Windows (called 16-bit) up to 3.11 are not supported. Any CPU with speed greater than 90MHz is sufficient. Please note that Windows have their own requirements to run properly. Windows NT Workstation 3.5 and 4 are not supported since they were primarily for corporate computing environment. As a matter of fact, we do not have those versions handy. So, there is not much we can do.

You need a MIDI enabled instrument as an input device. If this device has a USB connection, you do not need a MIDI input on your computer. Otherwise, you also need a MIDI input on your computer. You need either a GM (General MIDI) compliant Hardware MIDI Synthesizer or a low latency Software Synthesizer as a MIDI output device. If you use a standalone MIDI Synthesizer, you also need a MIDI

output on your computer. If you use a software synthesizer, you also need a sound card required for your software.