EarMaster 5

USER GUIDE

Users guide

EarMaster School 5
EarMaster Pro 5

Support and troubleshooting
If you need any help using or installing EarMaster, please visit:
http://www.earmaster.com/support

Some sections in this manual describe functionality that is only available in EarMaster School and not in EarMaster Pro.

Table of Contents

Installing EarMaster

Mac OS X
1) Insert the CD and wait for the contents to show.
2) Drag the EarMaster icon over to the "Applications" folder.
3) Run EarMaster and choose "Activate now" to enter your serial number and activate your license.

Windows
1) Insert the EarMaster CD in your CD-ROM drive. If the setup program does not launch automatically, then select "Run" from the Start menu and type "d:setup.exe" where "d:" is the letter of the CD drive.
2) When the installation program has started, you will be asked to enter your serial number. The serial number is placed above the CD in the EarMaster box or is printed on the top of your license agreement card.
3) Once the serial number has been validated, the installation begins. Follow the on screen instructions to proceed.

EarMaster can handle individual settings and results for an unlimited number of users on one computer. The settings and results are stored under the current Windows/OS X user. Therefore each user must have their own Windows/OS X account (i.e. own username) to do this.
EarMaster School can, however, also be configured to show a login screen to identify the users. Then the users are not required to have their own Windows account. This is configured in the *Administration* window.

To install **EarMaster School** on a network, please find the *Network installation* guide in the back of this manual.

What can EarMaster do for me?

Music is really all about hearing! When you play or hear music your ear is used to recognize notes, intervals, chords, major / minor tonality, scales, seventh chords, dominants, and so forth. Does your ear perceive the difference between, for example, major and minor scales? Between a 4th and a 5th? Between a mi7(b5) and a dim7 chord?

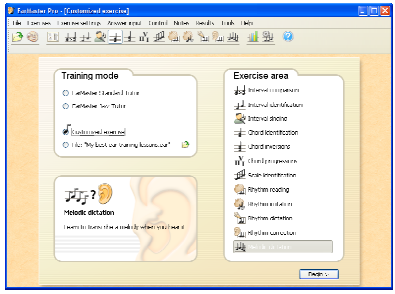
A Musical Ear is the single most important skill for musicians, but most musicians have poor aural skills because they do not practice ear training. Are you one of them?

Ear training with EarMaster will help you to:
- Play the music you intend to play.
- Understand the music you hear.
- Hear the music in your head when you read it.
- Bring together sight and sound.

Ear training develops greater musicality, confidence and enjoyment of music. You will experience that a Musical Ear helps you when you play music, sing, improvise, compose and transcribe. Ear training with EarMaster will give you a better understanding of all the things you are doing with music!

Getting started

Welcome to EarMaster!



The training wizard will be shown every time you run EarMaster. Here you will have an overview of the available training modes and exercise areas.

Choosing the Training mode

Basically, you can work with EarMaster using two different training modes:

Tutor mode
With the tutor mode, the exercises are controlled by the tutor. You don't need to know how to configure the EarMaster exercises. The tutor will do it for you and adjust the difficulty as you progress.

Customized mode
With the customized mode, you can configure the exercises to do exactly what you want. You can define what intervals, chords, rhythm values, etc, you want to train with and even create your own customized chords, scales and chord progressions.

If you are a *beginner* or *intermediate* level musician, you should always choose the *EarMaster standard tutor*. It contains many lessons in each exercise area. The *EarMaster Jazz tutor* is a supplement to the standard tutor and is not for beginners. It contains lessons in the exercise areas that are relevant for jazz. Interval lessons are, for example, common for both classical and rhythmic musicians. Therefore, there are only interval lessons in the standard tutor. The entry level in the Jazz tutor is different for each of the exercise areas, so just try it out. If you cannot complete the first lesson, then you probably need to complete more lessons in the standard tutor first.

If you want to experiment with special settings or you know exactly what you need to exercise, you should choose the *Customized exercise*.

Choosing the exercise area

What exercise area you should choose depends on your skills and interests. We suggest:

1. Beginners should choose the *Interval comparison* exercises in the *Standard tutor*.
2. After having completed a number of interval comparison lessons, you should also include the *Interval identification*, *Rhythm imitation*, *Rhythm reading* and maybe *Melodic dictation*.
3. Later also include *Chord identification*, *Scale identification* and *Rhythm dictation*.
4. Finally, include *Chord inversions* and *Chord progressions*.

You will get the best results if you work with several exercise areas every time you use EarMaster. We recommend that you practice at least 5-10 minutes every day in each of the areas you are working with.

Using the exercises

Working with exercises

You control the progress of the lesson with the large control buttons at the top of the exercise. Using these buttons you can get a new question when you want, play the question again, stop the playing and make EarMaster evaluate your answer.

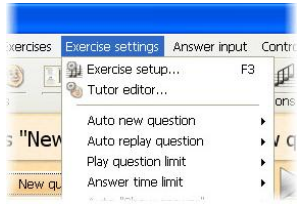
In the *Exercise settings* menu there are a number of options available depending on what exercise area you are working with.

When EarMaster has evaluated your answer, the correct answer will be shown with a green marking and the wrong answer with a red marking.
In the result status toolbar at the bottom of the screen you can see the total score in percent for this lesson.

To get detailed statistics of your results you can open the *Statistics* window. Here you can compare your current result with stored results from lessons you have completed previously.

Related topics:
- Exercise settings (below)
- Answer input

Exercise settings



In the *Exercise settings* menu there is a list of settings for the active exercise. With those settings you can control how the exercise should work. Here you can also open the Customized exercise setup window and the Tutor editor (only in EarMaster School).
The other options that are available depend on the exercise area and on the exercise setup you are currently working with.
Below is a list of all possible options:

Auto new question
Get a *New question* automatically after a question has been answered. The delay can be set in seconds.
If you only want an automatic new question after a correct answer, choose the *If correct answer* option. Then, If you answer a question wrong, you have time to find out what went wrong before you manually press the *New question* button. There are more options for this in the *Program settings*.

Auto replay question
Repeats the question with an interval until it has been answered. The delay between each replay can be set in seconds. You can stop the auto replay temporarily by clicking the *Stop* button while the question is being played.

Play question limit
Set how many times the question can be played. This is useful to make a test where the question (e.g. an interval) is often only played twice. The *Play question* button is disabled when the question has been played the maximum number of times.

Answer time limit
This limits the available time to answer the question. The time begins to count when EarMaster has finished playing the question. In Rhythm reading it is the time until you must have begun clapping the answer. This option is useful to make a test.

Auto "Show answer"
Makes EarMaster automatically press the *Show answer* button when the chosen condition is met. "*Correct number of tones*": The answer will be evaluated automatically when the user has entered the same number of tones as in the question. "*Correct answer*": The answer will only be evaluated automatically if it is correct. Choosing this option makes answering VERY easy.

Auto "Show rhythm"
(only available in Rhythm imitation exercises) Automatically shows the rhythm on the staff when the question has been answered.

Play lead-in
Plays a lead-in bar with the metronome before playing the question or playing your answer.

Play rhythm with metronome
Activates the metronome while playing a rhythm or a melody with rhythm.

Clap rhythm with metronome
Activates the metronome while clapping a rhythm. If it is not checked, you still must clap with the correct tempo, but you can begin anytime you want.

Evaluate note length
Makes EarMaster also evaluate the length of the notes you are clapping. This means you must hold the tone as given by its note value. Microphone input is not possible when *Evaluate note length* is activated.

Answer identification
Specify how EarMaster should interpret your answer. "*Absolute*": The pitch of the tones must be exactly the same as the question. "*Any octave*": The name of the tones must be the same as the question, but they may be transposed to any octave. "*Relative*": You may transpose your answer freely (e.g. if the question was the perfect fourth interval C-F, you may enter the tones D-G as the correct answer).

Tone naming
Choose between the standard tone naming and the solfege tone naming (Do-Re-Mi-...): "*Fixed Do*" means Do is always C, no matter what key the question is in. "Movable Do" means Do is always the root of the key.

Play tone on click
Hear the tones when entering them on the staff, guitar or piano, and when clicking on the multiple choice buttons.

Show key signature
This shows the key signature on the staff.

Show key name
This shows the name of the key on the staff, but only if *Show key signature* is checked.

Show first tone
Shows the root tone of the question on the staff, guitar and piano. The root tone is the bottom tone if the tones are played simultaneously or else it is the first tone. How the tone is inserted depends on the *Answer identification* option: If "*Any octave*" or "*Relative*" is chosen, then the tone is only shown temporarily as a grayed note and will disappear when the you insert a tone. This is to allow answering in another octave.

Tempo
Quarter notes per minute when playing tones. The basic note value is always a quarter note, so if the meter has another basic note value you need to think... In exercises that don't contain rhythms (e.g. interval identification), tones are always played as quarter notes.

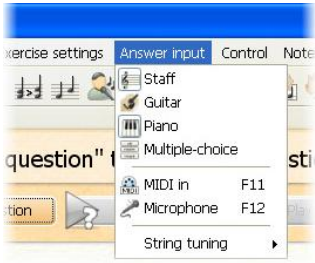
Visible metronome
This turns on the visible metronome.

Audio Metronome
This turns on the metronome sound.

Play harmonic/ascending/descending
When you have answered the question you are allowed to change the way the question or your answer is played. This is only for your own evaluation of the question and your answer. The setting for the lesson will not be changed so changes do not affect the following questions. When you press New question, it will be set back to the lesson settings. If you want to change the lesson so new questions are played in the way you want, then you must go to the *Customized exercise setup* to change it.

Answer input

There are several ways you can input your answer in the note based exercises (intervals, chords, etc).
In the *Answer input* menu you can choose which ones you want to use:



Staff
- To enter a tone, press and hold the left mouse button. Move the mouse up and down, while holding the mouse button. Release the button to insert the current tone.
- To delete a tone, choose the rubber from the note toolbar and click on a note.
Right-click in the staff to cycle through the available note values and the rubber.

Strings
You can choose different tunings, so this instrument can be a guitar, bass, violin, cello, banjo and more.
- To enter a tone, press and hold the left mouse button. Move the mouse around on the tablature while holding the mouse button. Release the button to insert the current tone.
- To delete a tone, just right-click on the tone.

Piano
The number of visible keys depends on your screen resolution. If your screen resolution is less than 1280 pixels wide you will only see a part of the full sized piano, but EarMaster will automatically show the octaves around the question.
A keyhole sign is shown on the center C.
- To enter a tone, press and hold the left mouse button. Move the mouse around on the keyboard while holding the mouse button. Release the button to insert the current tone.
- To delete a tone, just right-click on the tone.

Multiple-choice
The fastest way to answer the question is to use the multiple-choice buttons. Left-click the button to give it as your answer. Right-click to hear this option and see it transcribed on the staff/guitar/piano. Use the <TAB> and <Arrow> keys to select a button using the keyboard. Press the <Space> key to click on the selected button

MIDI-in
With an external MIDI keyboard (or other MIDI instrument) you can input tones very quickly or you can tap rhythms on, for example, a digital drum.
- To enter your answer, press all the tones you want to enter simultaneously on the keyboard. This will insert them on the staff/guitar/piano and then you can

release the keys.
- To change your answer, release all keys and then press all the tones you want to enter again.
From the MIDI instrument you can also remote control EarMaster (see the "Program settings" section).
If your MIDI instrument doesn't allow you to hold the needed number of tones simultaneously (e.g. Guitar or Wind MIDI controller), then you can enable the *One-by-one note input* option in the *Program settings*, to make MIDI input function in a way similar to the Microphone input.

Microphone

The microphone can be used both for pitch and rhythm input.
In the rhythmic exercises you can clap the rhythm or play it on a drum through a microphone.
In the pitch based exercises (i.e. identification of intervals, chords, etc), EarMaster uses Sound2midi to listen to the tones you sing or play in the microphone and find out what tone it is.
- To enter a tone, sing or play it in the microphone. When the correct tone is shown on the staff, guitar or piano, tell EarMaster to insert it. This can be done in 3 different ways:
a) Hold the same tone in a couple of seconds (the exact time can be configured in the *Program settings*)
b) Press the <Ctrl> or <Insert> key on the keyboard
c) Use the EarMaster MIDI remote control (see *Program settings*).

Computer keyboard

You can insert notes in the staff using the computer keyboard. Type the numbers 1 to 9 on the main keyboard (not the numeric keypad) to add a note of that interval above the root tone; hold down the Shift key while typing the numbers 1 to 9, to add notes below the root tone (descending).
The "root tone" is the root of the question. In melodic dictation it is the root tone of the key.

Exercise areas

 Interval Comparison

EarMaster plays two intervals and you answer which one you think is the greater. Choose **A** with the mouse or on the keyboard, if you think the first interval was the greater or **B** if the second interval was the greater.
The piano, guitar or staff is used to show the tones after you have answered the question. You cannot use it to enter you answer.

The interval comparison exercise does not require any knowledge about notes and music theory. Therefore, it is an excellent starting point for beginners.

Related topics:
- Working with exercises
- Customize interval, chords and scale exercises
- Interval theory

 Intervals, Chords and Scales

The interval, chord and scale identification exercises work much the same way. EarMaster plays some tones (an interval, chord or a scale); you answer what you think was played. You can learn how to hear an interval in the "Identifying intervals" music theory section.

Basically, you can give your answer in two different ways:
a) give the name of the interval/chord/scale. For example if you think the played tones was a perfect fifth interval, press the button called "Perfect fifth"
b) name the tones that were played, one by one. This can be done using the staff, screen guitar, screen piano, an external MIDI keyboard or by singing/playing the tones in the microphone. More information can be found in the "Answer input" section.

When you have added all the tones, click the *Show answer* button to make EarMaster evaluate your answer.

Related topics:
- Working with exercises
- Customize interval, chords and scale exercises
- Interval theory
- Chord theory
- Scale and mode theory

Interval singing

EarMaster plays a tone and asks you to sing or play an interval above or below this tone. Example: A tone (D) is being played and EarMaster says: "Sing the perfect fifth above D".
You sing an A into the microphone.

You can also use this exercise to learn to spell intervals. If you answer the question using one of the other answer input methods (see the "Answer input" section), then this exercise becomes an "Interval spelling" exercise.

Related topics:
- Working with exercises
- Customize interval, chords and scale exercises
- Interval theory

Chord progressions

EarMaster plays a chord progression and you answer what you think was played. Basically you can give your answer in two different ways:

a) Multiple-choice. For example if you think the played progression was a I-IV-V-I cadence, press the button called "I-IV-V-I". You must enable *Multiple-choice* from the *Answer input* menu to do this.
Your answer will be evaluated as either correct (100%) or wrong (0%).

b) Name each chord that was played (harmonic function and quality), one by one.
- To select a bar for input and play the chord in it, click on the bar on the staff.
- To change the quality for the selected bar, use the buttons in the *Quality* panel just below the staff.
- To change the harmonic function for the selected bar, use the piano or guitar. The harmonic functions of the current key are shown on the piano and guitar. Click on a tone to insert this harmonic function in the selected bar. Right-click on a tone to remove the chord.
- You can use a MIDI instrument to insert a chord. The bottom tone you play is identified as the root and from the rest of the tones you play, EarMaster finds the harmonic function (chord) that has the closest match. For example to insert an F minor chord, play the tones F and Ab simultaneously. To make it a Fm7, also play the tone Eb above (the seventh in a F chord).
- When you have completed all the bars, click the *Show answer* button to make EarMaster evaluate your answer.
Your answer will be evaluated as a score between 0% and 100% based on how many of the harmonic functions and qualities were correct.

Related topics:
- Working with exercises
- Customize interval, chords and scale exercises
- Chord progression theory

Melodic dictation

EarMaster plays a melodic phrase and you transcribe what you think was played.

Choose a note value from the note toolbar, the *Notes* menu or using a keyboard shortcut. Then insert the note with a click in the staff, or use the screen guitar, screen piano, MIDI or sing the tone in the microphone. More information about input methods can be found in the "Answer input" section. Some lessons do not include rhythmic evaluation. In this case, all the note values will be disabled except the whole note.

When you have added all the tones, click the *Show answer* button to make EarMaster evaluate your answer.

Related topics:
- Working with exercises
- Customize melodic dictation

Rhythm reading and imitation

Rhythm reading: EarMaster shows a rhythmic score and you clap the rhythm (clap what you read).
Rhythm imitation: EarMaster plays a rhythm that you must remember and repeat (clap what you hear). After the first attempt you can choose to view the rhythm score to support you in a second attempt.

You can clap the rhythm in several ways:
- Tap the rhythm on the spacebar or the Ctrl key
- Play it on a MIDI instrument
- Clap it into the microphone

MIDI and microphone input is activated from the *Answer input* menu.

While you clap the rhythm, EarMaster will transcribe all your claps in the score using green ticks. The ticks are placed relative to the notes in the score to show the exact timing of your claps. Then you can easily see how close you hit the notes.

If the clap sound is delayed, see the FAQ in the back of the manual.

When you have clapped all the bars, EarMaster will evaluate your answer. The ticks will change color. The ticks for claps that were used in the evaluation turn green and the ticks for claps that were not found to fit any note, turn red. Below each note, EarMaster will show the result of the evaluation. A sign will show how you hit the note:

- Correct
- Too early
- Too late
- Not hit at all

Related topics:
- Working with exercises
- Customize rhythm exercises

 Rhythm dictation

EarMaster plays a rhythm and you transcribe what you think was played.

Choose a note value from the note toolbar, the *Notes* menu or using a keyboard shortcut. Click on a bar where you want the note to be inserted.

When you have filled out all the bars, click on *Show rhythm* to make EarMaster evaluate your answer.

Related topics:
- Working with exercises
- Customize rhythm exercises

 Rhythm correction

EarMaster shows a rhythmic score and plays the same rhythm but with a few changes (inlaid errors). You identify the notes with errors and mark them in the staff.

Two different types of changes can be made:
- A note is removed
- A note is divided into two notes

Click on the staff to mark the notes that are changed.

When you have marked all the notes that were changed, click the *Show errors* button to make EarMaster evaluate your answer.

Related topics:
- Working with exercises
- Customize rhythm exercises

Customize the exercises

Customize interval, chords and scale exercises

In the list of intervals, chords or scales, click to check those that should be included in the exercise. You can also add your own custom chords and scales (see the "Edit chords or scales" section).

Playing
Choose how the question is played: *Harmonic*, *Ascending* or *Descending*. If you select more than one, EarMaster will choose among them randomly for each question.

Keys and Root movement
Choose how the questions are transposed. If you have specific needs for keys, tone range and position within the key, choose the *Advanced* option and click *Edit*.

Options
Play tonic: Play some tones before each question to establish the key of the question. Use this option if the question tones must be identified relative to the key, for example when using the moveable-do solfege tone naming.

Common tone (only in Interval comparison): If enabled, the two question intervals will have the same root tone. If the intervals are played melodic down they will have the top tone in common, otherwise the bottom tone.

Add deep root tone (only in Chord progressions): Double the root tones of the chords to add a bass line.

Remove 5th in Dom7 chords (only in Chord progressions): In complex jazz chords it is common practise to remove the 5th in dominant 7 chords.

Inversions
In Chord identification: Choose *Root position* to only include the chords as they are defined. Choose *Closed voicing* or *Open voicing* to allow the chord to be played in any possible combination (inversion) of closed voicing or open voicing respectively.
In Chord progressions, choose how the chords are inverted:
All chords in root position, Last chord in root position or *Random inversion of last chord.*
With the last two options, the preceding chords will be inverted to a position with the top tone closest to the top tone of the last chord.
There are more options described in the "Exercise control settings" section.

Related topics:
- Interval comparison
- Identification of Intervals, Chords and Scales
- Interval singing
- Chord progressions
- Edit Chords and Scales

Customize rhythm exercises

EarMaster makes random rhythms using an intelligent algorithm. Select what note values that are allowed, then EarMaster will make a rhythm by combining these note values in all possible ways.

Special patterns
To control more precisely how specific note values will appear in the rhythm you can use the special patterns. For example you can choose that the 16th notes (semiquaver) will always appear in groups of four which is much easier than allowing the 16th notes (semiquaver) to stand alone with other note values.

Rests
Include rests in the rhythm. EarMaster will only make rests of the note values that are selected.

Ties
Allow notes to be tied together across bar lines and across beat groups.

Time signature
Choose the time signature for the rhythm. You can select more than one. Then EarMaster will choose randomly among the selected time signature for every new question. With more complex rhythms you should only combine time signatures that are similar, because the note values you select are used for all selected time signatures.
For example combining 4/4 with 6/8 is not a good idea because in 6/8 you would mainly use dotted notes and the special pattern with three 8th notes (quaver), which are not very common in 4/4.

Options
Set the length of the rhythm (number of bars), the tempo and choose if it should be played with swing feeling. For the Rhythm correction exercise you can also set the number of changes that should be made in the rhythm.
If the user should not be allowed to change the tempo while exercising, you can choose this in the *Exercise control settings*.

Evaluation
Choose how EarMaster should evaluate the rhythm you have clapped. This is used when calculating the score.

There are more options described in the "Exercise control settings" section.

Related topics:
- Rhythm reading and imitation
- Rhythm dictation
- Rhythm correction

Customize Melodic dictation

EarMaster makes melodies using an intelligent algorithm. With the options in the exercise setup, you can control how the melodies are made:

Tones (bars)
Set the length of the melody. If *Rhythms* are enabled then you set the number of bars, otherwise it is the number of tones.

Scale/progression
The melody will be made of the tones in the scale you select here. All scales defined in the *Scale identification* exercise are listed here, also the user defined scales. By making your own custom scale you can control exactly what tones in the key that are used. Use the *Add custom scale* button as a shortcut to create a new user defined scale in the scale definition list.

Max. interval
Set the maximum interval between adjacent tones.

Ambit
Set the maximum allowed interval from the lowest tone in the melody to the highest tone in the melody.

Rhythms
Make the melody with note values, and also evaluate the note values when you answer the question. A correct note value counts as much as a correct pitch in the total score. Example: If you answer all pitches correct but none of the note values are correct, then your score will be 50%.
Select what note values that are allowed, then EarMaster will make a rhythm by combining these note values in all possible ways. Read more about how EarMaster makes rhythms, in the "Customize rhythm exercises" section.

Keys and Root movement
Choose how the questions are transposed.
If you have specific needs for keys, tone range and position within the key, choose the *Advanced* option and click Edit.

Options
Play tonic. If enabled, EarMaster will play some tones before each question to establish the key of the question. Use this option if the question tones must be identified relative to the key, for example when using the moveable-do solfege tone naming.

There are more options described in the "Exercise control settings" section.

Related topics:
Melodic dictation

Keys and root movement - advanced

Key

Select if you want to choose specific keys or specific root tones.
Specific key: EarMaster first chooses the key, then it places the interval or chord in the key as you have chosen in the Chord root setting (see below).
Specific root tone: EarMaster chooses the pitch of the root tone from your setting here and afterwards finds the key that fits. The *Chord inversion* exercise works differently. Here you set the bottom tone (not the root tone) so all inversions will be played at the same pitch.

Decide how EarMaster should choose among the selected keys or root tones. This can either be complete random or cyclic using the 5th circle.

Chord root

Choose how the interval, chord or scale should be placed in the key. Select what scale steps the root can be placed on:
All tones: All 12 chromatic tones in an octave.
Scale tones*:* The diatonic scale tones.
Step 1-4-5: The basic tonal cadence steps.
Diatonic interval: The scale steps where ALL of the first 2 or 3 tones in the interval/chord fits on a diatonic scale tone. For example, a minor triad will only be placed on step II, III and VI.
Root of key: Always place the root of the interval/chord on the root of the key.

Related topics:
- Customize interval, chords and scale exercises
- Customize Melodic dictation

Edit chords or scales

You can define your own custom chords, scales and chord progressions, to be used in the exercises. Right-click in the list of chords or scales to get a menu of options. You can *Play*, *Edit* or *Delete* the selected chord, and you can add a *New custom chord*.

Input tones on the staff, piano or guitar in the same way as in the exercises. The chord or scale must be entered as it would look like in the key of C (i.e. no fixed sharps and flats, but accidentals are allowed). When EarMaster generates questions it will transpose the chord to other keys, but the diatonic definition you have made here will be kept.
Example: if you have defined the tones C-Gb (or I-bV in chord progressions) and it is transposed to have Ab as the root tone, then the tones will be Ab-Ebb (which is the correct theoretical notation) and not Ab-D.

The customized list of chords and scales is shared among all users, so be careful when you delete or modify items on the list. They could be used by other users. A tutor has its own list of defined chords and scales. When you create a new tutor in the tutor editor, the existing list of defined chords and scales on your system is copied. All modifications you make to the list in the tutor editor will

only apply for the tutor you are working with. The list is however shared among all lessons in the tutor, so again be careful when you delete or modify items on the list.

Related topics:
Customize Interval, Chords and Scale exercises

Exercise control settings

The Exercise control settings window is available through a button in the exercise setup window. It is only available in EarMaster School.
When using the EarMaster exercises there are many options available in the *Exercise settings* menu and the *Answer input* menu. Most of these options influence how difficult it is to answer the questions. If you create lessons for other people, then you might want to control some of these options. This way you can avoid that users make shortcuts or cheat to get a better score. With the *Exercise control settings* you can force specific settings in the *Exercise settings* and *Answer input* menus.

Read the chapters "Exercise settings" and "Answer input" in this manual to get a description of each option.

The default setting for all the options is *User may choose*, which allows the user to change this option when doing an exercise. You can set any of the options you want to a specific behavior. When you do this, the user can no longer change this setting when doing the exercise.

Examples
1) If the user has control of the *Auto Show answer* option, then it is very easy to cheat. The user just needs to set it to *Correct answer* then all questions can be answered correctly without knowing anything about what was actually played. Therefore, you should set this option to *Disabled* if you want to evaluate the results from the users of the lesson.

2) It can be a problem having the *Play tone on click* option enabled. This option enables sound when entering tones e.g. in the staff or when right-clicking the multiple-choice buttons. For example, if the user should identify an interval played melodic up, the user just drags tones up and down the staff to find two tones that sound exactly like the tones in the question, without knowing what interval was played. This is simple pitch matching which is much easier than identifying the actual interval being played.

Related topics:
Customize interval, chords and scale exercises
Customize rhythm exercises
Customize melodic dictation

Results

High score

The *high score* window shows the score for all users that have been working with the currently selected tutor.

How the points are calculated
Each lesson in the tutor has points you can earn. Your score in the lesson is multiplied with the maximum possible points for the lesson. For example, if your score is 75% and the lesson has 20 points, then you will get 15 points for having completed this lesson.

Your score is the sum of points you have received from each lesson in the selected exercise area. If the *Overal high score* is chosen, then the score is the total sum of all points you have received in all exercise areas.

EarMaster only remembers the best result in each lesson. If you did not get maximum points the first time in a lesson, then you can always go back and try to get more points.

The results shown in the *Statistics* window are stored independently of the high score. These results can therefore be deleted without affecting the high score.

Related topics:
Statistics

Statistics

In the *Statistics* window you can view your result together with all historical results from the selected exercise area, and easily follow your progress.

When are the results saved?

Every time you finish a lesson, the result will be saved and will be shown here as a new line in the list. If you work with a customized exercise setup then the result will only be saved if you have answered at least 5 questions and you are always asked first if you want to save.
If you work with the tutor, the result is always saved, no matter how many questions you have answered.

Description of columns

In the window there are several columns with information about the result and the lesson it comes from. Most of these can be shown and hidden from the toolbar and from the *View* menu.
Date: The date where the lesson was started.
Time: The time when the lesson was started.
Tutor: The tutor that the lesson belongs to.

Lesson number and title: The number in the list of lessons for this exercise area.
Attempts: Number of times the user has completed the lesson (only visible when the *Show all attempts* option is unchecked, see description below).
Duration: The time spent on the lesson (only this attempt).
Answer time: The time spent on answering the questions. This is the sum for all questions in the lesson, of the time from the question was played/shown until it was answered.
Total result: Total score for all the questions in the lesson. The number of questions that was answered correctly is shown (if applicable), and the total number of questions that was answered.
Details: The score for each of the intervals, chords or scales that is included in the lesson.
Detailed numbers: Show the number of questions and number of correct answers for each interval, chord or scale.

Description of View menu options

In the View menu there are several options to control what users and results to be shown and control how they are shown.

Users
Choose what group of users that should be shown in the list of users: *All users*, *All students*, *All teachers*, *Users not in a class*, or choose a specific class. These options are only available in EarMaster School.

Results
Show all attempts: Shows all results, or else EarMaster will group results for the same lesson together and only show the best result for this lesson. Instead it will show the number of attempts, which is the total number of times this lesson has been started and a result was saved.
Only tutor results: if checked, all results from customized exercise setups will be hidden. The list will then only contain results from tutor lessons.

Result summations
Choose a period for the result summation calculation. The summation panel at the bottom of the results window shows statistics for the selected period of time:
Duration sum: The sum of the *Duration* column for the chosen time period.
Average answer time: The sum of the *Answer time* column divided with the total number of questions. This is the average answer time for one question.
Total result sum: The sum of the *Total result* column for the chosen time period.

Related topics:
High score
Export results

Export

Use the import and export functions to transfer results and settings from one computer to another.
The teacher can, for example, assign a tutor and lessons to a student and export this by email to be imported on the student's home computer. When the student

has completed the lessons at home, the results can be exported by email back to be imported on the teacher's computer.
Note: EarMaster only exports the tutors that are currently chosen for the user, i.e. the tutors that are listed in the "Training wizard" (the welcome window).

In the export window there are the following options:

User data to export

Assignments
Include the tutor and the lesson numbers to work with next in the exported data. When importing the data, you can continue on the new computer, with the lessons you were working with on the computer you exported from. If the current tutor is not the standard EarMaster tutor, then the tutor file will also be included in the exported data.

Results
Include the user's results in the exported data.

From user
Choose what user to export. Only teachers in EarMaster School can export users other than themselves.

Destination

Folder
Choose a drive or directory where the data should be exported to. This can for example be a floppy drive, a flash disk or on the local hard drive. All data files will be packed into one compressed zip file in the destination folder.

Attach to email
Create a new email with the exported data attached. The email address set in the user properties for the selected user will be inserted in the *To* field. The new email will be created in the default email reader on the computer (using the MAPI interface).

Export

When you have set the exporting options, click this button to perform the export.

Related topics:
- Statistics
- Import results

Import

Use the import function to import data that has been exported by EarMaster on another computer. The import function is found in the *File* menu.

To import a data file, just drag it to the import window, then you can see what user and what data is included in the file.

The import window contains the following options:

Source folder

Choose the source drive or folder, where the data should be imported from. If you drag the data file into the import window, the source folder will be set automatically.

Import data

Assignments

Import the tutor and the lesson numbers you want to work with next.

Results

Import the results. The imported results will be merged with the existing results on this computer. Result items that already exist will not be imported.

Import to user

Choose what user the data should be imported to, i.e. the destination of the data. Only teachers in EarMaster School can import to other users than themselves.

Import

When you have set the the importing options, click this button to perform the import.

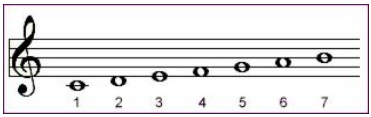
Related topics:

- Statistics
- Export results

Music theory

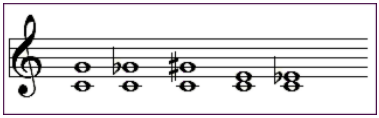
Interval theory

Intervals are the most fundamental part of ear training. All harmonies or melodies can be considered as a collection of intervals. As a beginner you should therefore begin with Intervals and later continue with, for example, Melody dictation to identify a sequence of intervals, or Chord identification to identify harmonies with more than two tones.
An interval is the distance in pitch between two tones. It is labeled by its numerical value and its quality. The numerical value indicates the number of tones of the diatonic scale it includes.



In the staff above, the diatonic tones are shown (i.e. the white keys of the piano) and they are numbered after their position in the C-major scale. C=1, D=2, E=3 etc.
Examples of interval naming: The interval from C (1) to D (2) is a "Second" because it includes two tones, the interval from C (1) to E (3) and the interval from E (3) to G (5) are both a "Third" because they include three diatonic tones.

Quality
The quality can be Perfect, Diminished, Augmented, Major, or Minor.
Unison, fourth, fifth and octave are called perfect intervals. Each of them can be diminished (one chromatic tone smaller) or augmented (one chromatic tone larger). The rest of the intervals within an octave are: second, third, sixth and seventh. Each of them can be major or minor.
Below is an example of a perfect fifth, diminished fifth and augmented fifth and a major and minor third.



In EarMaster you can hear the intervals in the Interval identification exercise when you right-click on the button with the interval name on it. You must enable *Multiple-choice* in the *Answer input* menu to do this. You can also hear the intervals when you right-click on them in the *Customized exercise setup*, and choose *play* from the menu that appears.

Related topics:
- Identifying intervals
- Intervals exercise

Identifying intervals

A simple way to identify an interval is to connect it with the opening of a well known song. For example the song "Amazing grace" begins with a perfect fourth. So, when you hear an interval that sounds like the beginning of Amazing grace, you know it is a perfect fourth. You can find examples of songs that begin with each interval in the "Template melody" section below.
It is, however, important that you, as soon as you can, try to make the direct connection between the interval sound and the interval name - without thinking of a melody every time. Because later, when you reach a more advanced level, it will be very confusing to mix another melody into the music you are currently working with.

Another method to identify intervals is to sing up and down the major-scale to find the matching interval. This method is closely related to the solfege system (using the syllables do, re, mi, fa, sol, la, ti) which is often used when learning sight reading. In the *Exercise settings* menu you can choose how EarMaster should name the tones. Set it to *Solfege* to use the solfege system.

Template melodies
Here are examples of melodies that begin with specific intervals. This is only for inspiration; you should find your own song that you know well:

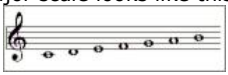
	Ascending intervals	**Descending intervals**
Minor 2nd	Isn't she lovely (Stevie Wonder) Nice work if you can get it	Sophisticated lady O little town of Bethlehem Major scale (descending)
Major 2nd	Happy birthday Strangers in the night Major scale (ascending)	Yesterday (Beatles) Satin doll M.A.S.H. Mary had a little lamb
Minor 3rd	Georgia on my mind A foggy day Minor triad	Frosty the snowman Hey Jude (Beatles)
Major 3rd	Morning has broken Oh, when the Saints Major triad	Summertime Giant steps Come rain or come shine
Perfect 4th	Amazing grace Love me tender We wish you a merry Christmas	Oh, come all ye faithful Yardbird suite
Tritone	Maria (West side story)	
Perfect 5th	Twinkle twinkle little star Wise men say (Can't help falling in love)	Feelings

Minor 6th	When Israel Was In Egypt's Land Morning of the carnival	Love story
Major 6th	It came upon a midnight clear NBC theme	You are a weaver of dreams Nobody knows the trouble I've seen
Minor 7th	Somewhere (West side story) Theme from Star trek	Watermelon man
Major 7th	Cast your fate to the wind Theme from Fantasy Island	
Octave	Somewhere over the Rainbow Let it snow Blue bossa	

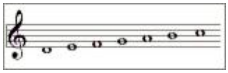
Related topics:
- Intervals theory
- Intervals exercise

Scale and mode theory

"Scale" means ladder in Latin. A scale is the tonal basis of music i.e. a set of tones from which you build melodies and harmonies. The tones in the list are arranged in order of their pitch. Since this tonal basis varies in different periods and countries, a large number of scales exist.
The major scale, minor scale and the church modes are all based on the diatonic scale. They consist of the same tones but the center tone (tonic) is different.
The C major scale looks like this:



The Dorian church mode contains the same tones but the root tone is D:



In the same way the Phrygian church mode has the root tone E. Lydian has the root tone F, Mixolydian has the root tone G, Natural minor (Aeolian) has the root tone A and Locrian has the root tone B.

Recognizing scales
A scale is a sequence of small intervals - usually tones (whole step) and semi-tones (half step). To identify a scale you need to know the unique sequence for this scale.
Scales based on the diatonic scale will always consist of 5 tones and 2 semi-tones. Therefore recognizing these scales can be simplified to identify the position of the two semitones.
In EarMaster you can hear the scales in the Scale identification exercise when you right-click on the button with the scale name on it. You must enable

Multiple-choice in the *Answer input* menu to do this. You can also hear the scales when you right-click on them in the *Customized exercise setup*, and choose *play* in the menu that appears.

Related topics:
Scale identification exercise

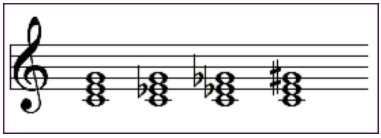
Chord theory

A chord is the simultaneous sounding of three or more tones - usually built on superposed thirds. Chords are defined by their root note and their quality (major, minor, 7, etc) - and eventually by their inversion.

Triads
A triad is a chord with three notes consisting of a root and the third and fifth above it. The most common triads are:

- Major - has a major third and a perfect fifth
- Minor - has a minor third and a perfect fifth
- Diminished - has a minor third and a diminished fifth
- Augmented - has a major third and an augmented fifth

On the staff below, the C major, C minor, C diminished and C augmented are transcribed:

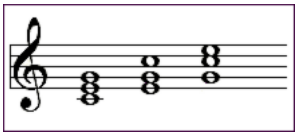


Seventh chords
These chords are triads with still another diatonic third superposed. The most common seventh chords are:

- (Dominant) 7 - is a major triad with a minor 7 added.
- Minor 7 - is a minor triad with a minor 7 added.
- Dim 7 - is a diminished triad with a diminished 7 added.
- Half dim - is a diminished triad with a minor 7 added.

There are more "triad + 7" combinations than mentioned here. You can find them in the chord definition table in the *Customized exercise setup* of the *Chord identification* exercise.

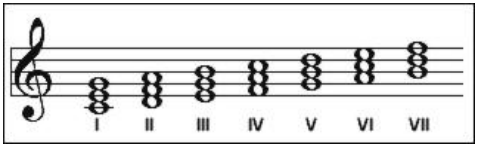
Inversions
The original position of a chord with the root note at the bottom is called the root position.
When the third of the chord (e.g. E in a C major triad) is at the bottom it is said to be in first inversion. When the fifth of the chord (G in a C major triad) is at the bottom it is said to be in second inversion.
On the staff below, the C major chord is shown in root position, 1. inversion and 2. inversion:



Related topics:
- Chord identification exercise
- Chord progression theory
- Chord progression exercise

Chord progression theory

A chord progression is a series of chords played in a row. When identifying chords within a progression, the main task is to find its harmonic function within the key i.e. compare the chord to the tonic which is played before the progression. The harmonic functions are written with the Roman numerals I, II, III, IV, etc, which denotes the degree within the scale.
Each of the seven degrees of the major and minor scale can serve as the root of a triad. The triads on the "tonal" degrees of the scale, I, IV and V, are the most important for establishing the tonality of a piece.
Below is shown the seven degrees of a C major scale:



I (C major), II (d minor), III (e minor), IV (F major), V (G major), VI (a minor), VII (b dim)

In minor keys, EarMaster always denotes the 3rd, 6th and 7th step as bIII, bVI and bVII to avoid confusion because the steps are different. E.g. III is a major 3rd above the root in a major key while in a minor key it is a minor 3rd above the root and therefore it is denoted as bIII.
To identify chord progressions it is a great help to listen to the bass tone which is usually the root of the chord. Notice that several chord progressions can have the same root movement but different quality of the chords. You can disable the root tone in EarMaster to make it harder for you to recognize it.

Related topics:
- Chord progression exercise

For the teacher

Introduction

(The functionality described in this "For the teacher" section is only available in EarMaster School.)

EarMaster is an ideal tool for your ear training teaching. With the *tutor editor* you can make lessons that cover the ear training areas you are currently teaching. With your tutor the students are challenged individually based on their performance and they receive instant feedback.

You can then focus on the most difficult questions and explain the confusing concepts involved. You have access to live statistics on all students' performances. These can be detailed statistics for the individual student or a broad overview of the whole class.

Students can also do their ear training after class - as homework in the computer lab, or you can email the tutor to them so they can work at home. With the result exporting facilities the students can email their results back to you from their home computer, or bring it on a USB flash drive.

EarMaster School is a motivating and effective teaching tool. Your students will get much more practical training of their ears with EarMaster, and it is far more motivating than listening to a CD.

Related topics:
- Tutor editor
- Result statistics
- User overview
- Class maintenance
- Export results

User overview

In the user overview window you can view a group of users and easily compare their results and change their settings.
All results and statistics apply only to the selected exercise area. In the *Exercises* menu you can choose what exercise area you want the results and statistics to be shown for.

Columns and panels

There are several columns and panels with information about each users settings and results. Most of them can be shown and hidden from the toolbar and from the *View* menu.
Name: The last and first name of the user.
Last result: Consists of three sub-columns with information about the last lesson completed: *date*, *lesson title* and *result*.

Summations: The time period can be set from the *View* menu. The summations consist of three sub-columns:
Duration sum: The sum of the Duration column for the chosen time period.
Average answer time: The sum of the Answer time column divided with the total number of questions. This is the average answer time for one question.
Total result sum: The sum of the Total result column for the chosen time period.
Tutor: The tutor that will be loaded by default next time this user opens EarMaster.
Class: Name of the class this user is assigned to.
Info panel: Panel with information about the user's current settings (properties) and the last completed lesson.
Detailed results: Panel with detailed list of results. It contains exactly the same information as the *Results* window.

View menu options

In the *View* menu there are several options to control what users and results you see and how you see them.

Users

Choose what group of users that should be shown in the list of users: All users, All students, All teachers, Users not in a class, or choose a specific class.

Results

Show all attempts: Shows all results, or else EarMaster will group results for the same lesson together and only show the best result for this lesson. It will then show the number of attempts, which is the total number times this lesson has been started and a result was saved.
Only tutor results: If checked, all results from customized exercise setups will be hidden. The list will then only contain results from tutor lessons.

Result summations

Choose a period for the result summation calculation. The summation panel at the bottom of the results window shows statistics for the selected period of time: The summation panel at the bottom of the results window shows statistics for the selected period of time:
Duration sum: The sum of the Duration column for the chosen time period.
Average answer time: The sum of the Answer time column divided with the total number of questions. This is the average answer time (for one answer).
Total result sum: The sum of the Total result column for the chosen time period.

User management

In the *User* menu you have the following options to manage users:
Assign exercise setup: Choose what custom exercise setup will be loaded by default, next time this user opens EarMaster.
Assign tutor: Choose what tutor will be loaded by default, next time this user opens EarMaster.
New user: Create a new user in EarMaster.
Properties: Change the properties for the selected user. Here you can set: name, username, password, access rights in EarMaster, class and default destination email address when exporting from EarMaster.
Delete results: Delete all results from before a specific date. Only for the selected user.

Delete user: Delete user from EarMaster including all settings and results. To select multiple users, click on the first user you want to select. Press and hold the <Shift> key while you click on the last user to select.

If a user is currently using EarMaster on the network, the color of the users name will turn green. EarMaster automatically updates the results and statistics for the active users. This way you can follow the progress of a whole class of students in the computer lab.

Related topics:
Class maintenance

Tutor editor

The tutor editor is available from the *Exercise settings* menu, but only for teachers in EarMaster School.

With the tutor editor you can make series of lessons and save them in one tutor file. Other users can easily open your tutor and begin working with the lessons you have made.
A lesson is actually a custom exercise setup where you have added a few extra properties like a title, description and some limits that control what result (% score) is needed to move on to the next lesson.
Each exercise area has its own list of lessons. Therefore, you can only control the order of the lessons within one exercise area and not how the user jumps among the available exercise areas.

To create a new lesson:
1. Choose the exercise area it should be added to (from the *Exercise* menu).
2. Click the *New lesson* button.
3. Give the lesson a title on the *Properties* tab and click *Ok*.
4. Now the lesson is created and you can edit the exercise setup to the right of the list of lessons.

Here is a description of menu items in the Tutor editor:

File

Insert tutor
You can import lessons from another tutor file into the current tutor. This will append all the lessons from the chosen tutor to the end of the list. Only lessons for the current exercise area will be added. Afterwards, you can delete the lessons you did not want imported.

Properties
Properties for the tutor. Give the tutor a title, a description and enter the name of the author of the tutor. The title will be used to represent this tutor in EarMaster, i.e. in the list of tutors and every time a new lesson is introduced. The description is shown when pressing the Description button in the list of tutors (when you open a new tutor).

Lesson

Try lesson in EarMaster
Find out how the exercise setup you have made for a lesson works in practice. When you call this function, the currently selected lesson will be loaded into the exercise.

New lesson
Create a new lesson in the list.

Delete lesson
Delete the selected lesson.

Properties
Change the properties for the selected lesson. This is the title, description, number of questions, required score to move on to next lesson, the description of the lesson and more. Use the on-line help in EarMaster to get a description of these options.

Options

Confirm changes to lessons
If checked, EarMaster will ask you to confirm when changes to the exercise setup are saved in the lesson.

Copy rhythm lessons
The exercise setup for the rhythm exercise areas is very similar. Therefore, it is obvious to reuse lessons made in one rhythmic exercise area in another rhythmic exercise area. With this function you can copy all lessons in the current selected rhythmic exercise area into another rhythmic exercise area. If the destination already contains lesson, the copied lessons will be added to the end of the list.

Export all text to clipboard
Copies all titles and descriptions from all the lessons in the tutor into the clipboard. Then you can paste the text into any other program. This is useful if you want the complete overview to review all the text you have written or if you want to edit or spell check it in your favourite word processor.
The text is organized in exercise areas and ordered like in the list of lessons. The title of the lesson is the text on the same line as the lesson number (e.g. "[-7-] My lesson title"). The following lines until the next lesson number is the description of the lesson. Please be careful not to change or delete the text inside [and].
The lenght of the lesson title cannot exceed 51 characters.
When you are done with the text, select it all in your word processor and copy it. Then choose the *Import all text from clipboard* function in EarMaster. If any title is more than 51 characters long or any of the identifiers inside the [ ] brackets are garbled, then EarMaster will show a warning and not import the text.

User maintenance

In the *User maintenance* window found in the *Tools* menu, you can add and remove users in EarMaster and change their settings.

With the default settings, users are created automatically in EarMaster when they open it for the first time. They are created as students with default user rights. Here you can change their user rights. If the users are not created automatically you can add each of them manually in this window.

In the *View* menu you can choose what users you want to view in the list.

In the *User* menu you have the following options to manage users:
Assign exercise setup: Choose what custom exercise setup will be loaded by default, next time this user opens EarMaster.
Assign tutor: Choose what tutor will be loaded by default, next time this user opens EarMaster.
New user: Create a new user in EarMaster.
Properties: Change the properties for the selected user. See description below.
Delete results: Delete all results from before a specific date. Only for the selected user.
Delete user: Delete user from EarMaster including all settings and results.
To select multiple users, click on the first user you want to select. Press and hold the <Shift> key while you click on the last user to select.

Related topics:
User overview
Class maintenance

User properties

User

Username

If you have your own user account in Windows/OSX, then you must use this user name here. If several users share the same user account in Windows/OSX, then you can enter any user name, but it will only work if you also uncheck the Use Windows/OSX login option in the Administration settings.

Password

If you are not worried about security, don't enter any password. Then you only have to type your username when you open EarMaster. You should only enter a password if you do not have your own account in Windows/OSX.

Access

Access level

There are three access levels in EarMaster:
Administrator: Access to everyting.
Teacher: Access to everything except the Administration option in the Tools menu.
Student: Limited access depending on the access options below. In addition, the student has no access to the tutor editor, and to change settings and to view results for other users.

Allow tutor change

Allow the user to choose another tutor or another lesson than the one that has been assigned to him. If you want to be sure that the user works only with the tutor and the lesson you have decided, uncheck this option.

Allow exercise setup
Allow user to access the custom exercise setup. If not checked, the user can only use EarMaster with a tutor.

Allow edit chords
Allow user to add, edit and delete custom chords and scales. Be careful because all users share the same set of customized intervals chords and scales, so one user can easily destroy other users work including the teachers work...
When you un-check this option, the user can still edit chords and scales, but the changes are not saved and will be be lost when EarMaster is closed.

Allow private program settings
Uncheck if EarMaster should not save the program settings for this user account. This is useful if you create a user account that should be used by several users. Then EarMaster will always load the default program settings set by the administrator in the Administration window.

Options

Class
Assign the user to a class. You must first create the class in Class maintenance in the Tools menu.

Email
When exporting results or assignments by email, this address will be used by default (you can still change it when you send the email). For the home user, this could be the address of the teacher that should receive the results.

Private folder
Specify the location of your private EarMaster folder. The private folder is used to load and save files that are only used by you. If you are using EarMaster School in a network, please be carefull. The path must work on all computers. It is recommended to use the UNC format: \\servername\sharename\path.

Class maintenance

With a class you can group several users together in EarMaster. This is needed if you want to view or print results for several users and don't want to include them all.

With Class maintenance found in the Tools menu you can add and remove classes. Click *New class* to create a new class. Then click *Add/remove* to add students to the class. They must first be created as users in EarMaster to appear in the list.
Click *Delete class* to remove the Class. This will only remove the grouping of the users and not delete the users from EarMaster.

See also pt. 6 in the "Network installation" guide.

Reference

Program settings

In the *Program settings* window found in the *Tools* menu you can set many general settings for EarMaster.

Environment

Language
Set the language of all text in EarMaster. It will also set the language of the help file and standard tutor. If the help file or standard tutor is not available in the new language, EarMaster will use English for those.

Font
By default, EarMaster will use the font and size defined in Windows for message text. If you want to change the font, size or script for EarMaster only, do it here.

Transposing instruments
If you are using an acoustic instrument with EarMaster, either with microphone input or just playing together with the question, set the transposing of your instrument here. This setting will transpose all playing and recording all over EarMaster.

Rhythm notation
Specify the spacing between notes. "*Fixed space*": the space between notes is the same no matter what note value they have. This is a very compact notation, useful for small screen resolutions. "*Time proportional*": the spacing between notes is proportional with their note values. This also means all bars have the same width.

Auto new question
For exercises where the evaluation is in % and not just correct or wrong, you can set when the answer should be considered as correct. This is used for the *Auto new question* function and to choose the sound effect, but it cannot be used to improve the result.

Reset all tips
If you have checked the "*Don't show this message again*" option when a message is shown in EarMaster, this tip or messages will no longer be shown. Click this button to make all the messages show again.

Effects/Microphone

Intro music
Enable the introduction music when EarMaster starts.

Sound effects
Enable sound effects, to hear a sound every time you answer a question. Choose the volume and a wave file. All wave files in the EarMaster\Media directory will appear on the list. Choose *(none)* to disable a specific sound effect.

Auto insert
If you use the microphone to input tones or use MIDI-in with the "One-by one tone input" option checked, then it might be inconvenient to press the <Insert> button on the computer keyboard to insert the tones. EarMaster automatically inserts the tone if you hold it for a period of time. Here you can set how long time you must hold the tone before it is inserted. You can "disable" it by setting a high value.

MIDI devices

MIDI in device
Choose what device (driver) should be used for MIDI in. If the list is empty, then you need to install drivers for your MIDI in device (soundcard or midi interface), or maybe it doesn't support MIDI in at all.

Transpose MIDI in
Set how many semi-tones the MIDI in should be transposed with.

One-by-one tone input
With the normal EarMaster behavior you must hold all the tones in the answer simultaneously. When this option is checked you can input tones one-by-one, just like the microphone input.
Enable this, if you use a wind controller or other midi controller that only plays one tone at the time - or if you just prefer to input one tone at the time.
To delete a tone with MIDI, use *Remote control* (see below) to activate the *Undo* function.

MIDI out device
Choose what device (driver) should be used to play MIDI sound. EarMaster uses MIDI sound to play all tones and rhythms. If the list is empty then you need to install drivers for your sound card or MIDI device.

Synchronize rhythms
If your sound card has a delay when playing MIDI sound, set it here. Then EarMaster can compensate for it. If the delay is unknown, then click the start button and adjust the delay until it is synchronized with the flash.

If your sound card has a delay, it is not possible to use MIDI-sound for the clap sound from the spacebar. EarMaster then uses a wave file with a clap sound, to avoid using the delayed MIDI sound. The wave file setting is available on the *MIDI instruments* tab.
There is more information in the FAQ in the back of this manual.

MIDI instruments

EarMaster has six different sound profiles. There is a profile for the piano, the guitar, two profile for playing rhythms and two profiles for the metronome. One rhythm profile is for a clap sound without sustain and the other one is for clap sound with sustain. Only one of the rhythm profiles are visible at the same time. Which one is used depends on the setting of *Evaluate note length* in the Exercise settings menu.

For each of the profiles you can set the following:

Channel

This is the MIDI channel the tones are sent to. There can only be one instrument setting for each channel, so you must have different channels for each profile. This does not apply for Channel 10, which is the rhythm channel. Several profiles can use it at the same time.

Instrument

The instrument sound for the profile. This setting is only enabled if the *Send program change* option is checked. The instrument names in the list are from the standard GM instrument table. If it doesn't match your sound module you can lookup the instrument number in the manual for your sound module. For the rhythm and metronome profiles, this setting is disabled when the MIDI channel is set to 10 (the rhythm channel). If you want to choose another instrument for those profiles, choose a channel other than 10.

Attack

Set the attack (volume) for the tones in this profile.

Note

Set the MIDI note number to be played for rhythm claps and the metronome. The percussion names in the list are from the standard GM rhythm channel instrument table. If it doesn't match your sound module, you can lookup the note number in the manual for your sound module.

Wave file

When there is a delay in the sound card, it is not possible to use MIDI for the clap sound on the space bar. Instead EarMaster uses the wave file chosen here. The list contains all wave files in the EarMaster\Media directory. Choose *(none)* to disable the sound.

Send Program change

Changes the instrument sound automatically in the sound module. If not checked, you must set the instrument on your sound module manually. This option should be checked unless you have special needs, for example a special setup of external synthesizers.

Remote control

MIDI remote control

You can control several functions in EarMaster with your MIDI instrument. For example you can press the large control buttons at the top of each exercise. You can also undo the last operation and you can make EarMaster insert the current tone when you sing in the microphone or play on your MIDI instrument.

For each remote control function you can define what MIDI message it should respond to. This is done by setting the Channel, Type and Value:
Channel: The MIDI channel EarMaster should listen to. * means all channels.
Type: Can be set to Tone (note on), Program (instrument/program change) or Controller (special MIDI functions, for example the Sustain pedal).
Value: If Tone is selected for the type you can set exactly what tone it should respond to. If Program or Controller is selected, then you set here what program

number or controller number it should respond to.

The most common used controller message is the Sustain pedal, which is number 64. You can find the complete list in the manual for your sound module or on this web page:
http://www.midi.org/about-midi/table3.shtml

EarMaster folders and file types

Folders used by EarMaster

There are two default folders defined in EarMaster, a common folder and a private folder. In the open and save dialogs there are shortcuts to these default folders for easy access:

Common folder
The Common folder is where teachers should save tutors and customized exercises that should be accessable by all users. This folder is a sub-folder to the "Shared data files" directory (see below).

Private folder
The private folder is where the user should save customized exercise setups that are private and not should be opened by other users. Each user has his own private folder.
Windows
In *EarMaster Pro*, this folder is always
"C:\Documents and Settings\<username>\<Application data>\EarMaster"
In *EarMaster School* the default location is either "<My Documents>\EarMaster" or "<Home folder>\EarMaster", depending on what settings the Administrator has chosen. The default location can however be overriden for each individual user in the user properties.
Example: "C:\Documents and Settings\<username>\My Documents"
OS X
In both EarMaster Pro and School, this folder is <Homefolder>/EarMaster

Shared data files directory
Here EarMaster stores all the data files i.e. user profiles, settings and results.
In *OS X* the default location is "/Users/Shared/EarMaster/5.0"
In *Windows 98* and *Windows ME*, the default location of the data files is "<installation path>\Shared" (Example "c:\Program files\EarMaster Pro 5\Shared")
In *Windows 2000, XP or newer* the default location of the data files is "<Common Application data>\EarMaster\5.0" (Example "C:\Documents and Settings\All Users\Application Data\EarMaster\5.0")

If you have chosen *Server install* when installing EarMaster School, the default location is a subdirectory to the installation directory. In EarMaster School you can change the location of the Shared data files (see the "Administration" section).

File types used by EarMaster

***.ear - Customized exercise setup file**
This file contains a setup for all exercise areas in the same file. It does not contain customized chords and scales, i.e. it uses those defined in the EarMaster program that loads the file. Therefore a *.ear file can only be used on other EarMaster installations if it doesn't use customized chords/scales or if they are also defined on the new computer at the same positions.

***.tut - Tutor file**
This file can contain any number of lessons for each of the exercise areas. A lesson is a *Customized exercise setup* with a title, description and a few more properties added. The tutor file has its own list of customized chords and scales (which is defined in the tutor editor) and therefore this file can be used on any computer with EarMaster Pro or EarMaster School.

***.his - Highscore file**
The high score file contains a list of users and their points in each of the lessons in a tutor. The high score file is always linked to a tutor file and has the same file name; only the extension is different. If you make changes to a tutor in the tutor editor, EarMaster will automatically delete the associated high score file.

***.da5 - Binary data files**
The EarMaster binary data files are stored in the \Shared\Data directory and contain user data, settings, results and more.

***.lan - Language file**
This is a text file that contains all the text in EarMaster, i.e. menus, messages and pre-defined chords and scales. If you want to change the terminology used by EarMaster, simply open the file with a text editor (Notepad in Windows or Textedit in OS X) and edit the text. The language files are in the "Language" sub-folder to the installation directory.

Export result database

You can export the EarMaster user list and selected results to a standard data interchange format called CSV. This is actually a text file with a standardized formatting that allows databases and spreadsheets like Excel to read it.

This is useful if you need to backup results in a format that is readable by any program (required by some schools), or you want to make further statistical analyses on the results beyond what EarMaster offers.

To export, choose what users, exercise areas and time period you want results from. Then choose a destination folder and click *Export*. This will create the file "Users.csv" with a list of all the users that was exported. The fields in the file are: Username, Full name, Access and Class.

For each user listed in "Users.csv" it also creates a file "<username>.csv", which contains the exported results for this user. The fields in this file are: Date, Time, Exercise area, Duration, Tutor, Lesson number, Lesson name, Number of questions, percent correct answers and a list of detailed results.

Administration

The *Administration* window found in the *Tools* menu is only available in EarMaster School and only for users created as Administrators in EarMaster.

Shared data files

Specify where EarMaster can find the folder with its data files. See the "EarMaster Folders and file types" section for a description of the default location of this folder.
Here you can choose another location for the data files, but please follow the "How to move the data files" instructions below.

If you run EarMaster from a shared network drive, then changes to this path will apply to all computers that load EarMaster from this location.
The location of the data files is stored together with the program file. Then EarMaster can find the data files even when loaded from a server, on a client where it is not installed.
If you run EarMaster from a local drive on the computer then changing the shared data path will only apply to this computer.
A text in the window will inform you about the scope of this change.

How to move the data files:

1. Copy (not move) the "Shared" folder with all files and subdirectories from the current location to the new location. See the "EarMaster Folders and file types" section for a description of the default location of this directory. If several computers should use the same data files, be sure to place the Shared folder on a network drive that is accessible from all computers.
2. Go to the *Administration* window (in the *Tools* menu) and set the new location of the data files. If you load EarMaster from a network drive, be sure to give the path in a way that works on all computers. The safest way is using the UNC format "\\servername\sharename\directory".
3. Close EarMaster and rename the old shared folder to for example "OldShared".
4. Open EarMaster and verify that everything works and that users and results are still there.
5. Delete the "OldShared" folder.

Private folder

(this option is only available in Windows) All users have a private EarMaster folder where their own customized exercises are stored. Here you can set what the default location of the private folder is. See also the "EarMaster Folders and file types" section.
A *Home folder* is a folder on the network that is yours. The location is set in the Windows user profile and is controlled by the Administrator on the network. EarMaster will get the location (of the home folder for the current user) from Windows.
If you have specified that EarMaster should use the Home folder, but the Windows user does not have a home folder then EarMaster will use "My

documents" instead.
If you use EarMaster in a network without roaming of user profiles then you should use the *Home folder*, or you can set a location in the properties for each user in EarMaster.

Options

Use Windows/OS X login

Automatically loads the usersettings based on the username of the current Windows/OS X user. If not checked, EarMaster will show a login window every time it loads.

Auto create new users

Allows creation of new users in the EarMaster user list when they load EarMaster for the first time. If the *Use Windows/OS X login* option is checked, the user is created automatically, if the *Use Windows/OS X login* option is not checked, EarMaster will show an *Add new user* button in the login window.
If not checked, new users can only be added in the *User maintenance* window by a teacher or administrator.

Functions

Save default program settings

The program settings are saved for each user as records in the \Data\Settings.da5 file. When a new user is created, the profile is created with the program settings from the *default* record. If you want new users to get specific program settings when they login for the first time, configure EarMaster as you want it to be and then press the *Save default program settings* button.
The program settings are:

- All settings listed in the *Exercise settings* menu
- All settings shown in the *Answer input* menu
- All settings shown in the *Program settings* window (in the *Tools* menu)
- Position and size of windows and toolbars

Delete results

To reduce the size of the result databases and reduce the network traffic, you can delete old results here. All results from before the selected date will be deleted. The results are deleted for all users.

Appendix

Network installation

EarMaster School can be installed and integrated in a network so users can use their personal EarMaster profile from any client. EarMaster School can even run directly from a server without installation on the clients, but you can also install it on the clients to reduce network traffic. Do the following:

Installing (for the administrator)

Windows: Follow the instructions 1a, 2a and 3 to 6
OS X: Follow the instructions 1b, 2b and 4 to 6. If you have a smaller and fast network, you might want to install EarMaster to run directly from the server, without installation on the clients. In that case use step 1a and 2a instead.

1a) Install EarMaster on the server
Run the installation program and follow the instructions.

Windows only:

> On the page *Select Additional Tasks*, be sure to set the *Destination of shared data files* setting to *Server install*.
> This will place the shared data files in a subdirectory to the installation directory (can be moved to another location later, see instructions in the "Administration" section), and it will install the client setup utility (described in step 3).

When you have installed EarMaster on the server you can run the EarMaster application directly from the server on any client. When you run EarMaster from a shared network drive it will automatically look for the data files in the folder from where the program file was called and not on the local computer.

2a) Run EarMaster once from a client computer to configure it
Make sure you run EarMaster from a shared drive on a client, and not directly on the server. This will force EarMaster to load and save the administration settings together with the program file on the server and not, as usually, in the registry of the local computer.

You are asked if EarMaster should use the Windows/OS X login to identify users. If all users have their own login in Windows/OS X - Answer Yes! EarMaster will then get this username from Windows/OS X to identify what user settings to load. If you answer No, EarMaster will show a login window every time it is started.

You are asked to create your self as a user (Administrator) in EarMaster.
If you answered **No** in the previous question you must remember the username and password entered here because only the Administrator can give other users "Teacher" and "Administrator" rights. Do not use your Windows/OS X admin password because EarMaster uses only a soft encryption algorithm that is easy to break for a skilled hacker.
If you answered **Yes** in the previous question then you cannot enter a username

and password. Instead EarMaster will attach the new Administrator user to the current Windows/OS X user account.

After choosing a MIDI device for this client and a screen instrument for your user profile, you can enter the Registration name and serial number for this network installation.

Windows only:

Opening help files from a network drive is not allowed by the security in Windows Vista (and latest updates of Windows XP). Therefore the online help in EarMaster does not work when it runs from a server. To solve this you can install EarMaster on the clients (step 3) or find solutions here: support.microsoft.com/kb/896054

Running a program from a network drive gives a security warning in Windows Vista asking you to confirm running the file. To avoid this warning you can install EarMaster on the clients (step 3) or you can change the security settings:
Go to "Internet options" in the Control panel. On the "Security" tab, add the name of the server where EarMaster runs from (e.g. \\MYSERVER) to the "Sites" for "Local intranet". Then set the security level for "Local intranet" to "medium-low" or if you want a higher level, modify it to a custom level with "Launching applications and unsafe files" set to "Enable".

Now EarMaster is configured to run on any client!

1b) Install EarMaster on a master-client
Install EarMaster on a client to prepare a master application bundle. This master can be distributed unaltered to all client computers in the network. The master client must not be the same computer as the server where the shared data files should be placed.

2b) Configure the master-client
Run EarMaster on the client to create the data files in /Users/Shared/EarMaster. You will be asked to create an administrator account in EarMaster. It will be connected to your OSX username. If several users share the same account in OS X, open "Administration" in the "Tools" menu and disable the "Use OS X login" option, this will force EarMaster to show its own login screen everytime it runs.

Copy (not move) the EarMaster folder with the shared data files from /Users/Shared/ to the wanted location on the server.

Open the "Administration" settings in the "Tools" menu and set the new location of the data files. This settings will be stored inside the application bundle so you can distribute the bundle unaltered to all the clients in the network.

Close EarMaster and delete the local EarMaster data folder in /Users/Shared/.

Run EarMaster again and verify that it now uses the shared data on the server (If you are asked to create an administrator again or other error messages appears about files not found, then EarMaster has not been configured correct).

The bundle is now ready to be distributed on the network.

3) OPTIONAL: install EarMaster on the clients
To reduce network traffic you can install EarMaster on each client. The program files of about 6 MB will then be loaded from the client and not from the server. To install EarMaster on a client, run the "ClientSetup.exe" program once on each client. The client setup program is in the same folder as the EarMaster program file on the server.

4) Add teachers
New users are added automatically to EarMaster when they run it for the first time (unless you disable this feature in the *Administration* settings). Users that are automatically created when they log in, will however only have *student* user rights to begin with.
To give the teachers immediate access to the facilities they need to use, you should add them as *Teachers* in EarMaster. If each user have their own account in Windows/OS X then you must know their user name to do this. To add a teacher:

1. Find *User maintenance* in the *Tools* menu.
2. Click on the *New user* button in the toolbar.
3. Type in the full name and username on the *User* tab and set the *Access level* on the *Access* tab to *Teacher*.
4. Finally click *Add* to create the user in EarMaster.

Repeat these steps until all teachers are created in EarMaster.

Creating students and classes (for the teacher or administrator)

5) Add students
Users can be added to EarMaster in two different ways:

a) Find *User maintenance* in the *Tools* menu. Choose *New user* to create a new user. Note: if all users have their own account in Windows/OS X, you must know their username to create users this way.
b) Go to the computer lab with your class and let each student run EarMaster. When EarMaster is executed by a user that is not yet created in EarMaster, this user is (by default) automatically created.

6) Create a class
You are not required to group the students in classes, but it is a very good idea if there are many users. When all the users for the class are created in EarMaster, do the following:

1. Find *Class maintenance* from the *Tools* menu.
2. Click the *New class* button to create a new class.
3. Give the class a name and click the *Add/remove* button to add students to the class.
4. In the new window that shows up, select the users that should be added to the class and click *Add*.

When the year or semester is gone and the name of the class changes to a new number, just go to the *Class maintenance* to change the name of the class. You don't need to add the users again.

License Agreement for EarMaster Software

IMPORTANT: This EarMaster License Agreement is a legal agreement between you (either an individual or a single entity) and EarMaster ApS for the EarMaster software product identified in your license, which includes computer software and may include associated media, printed materials, and "online" or electronic documentation - hereafter called the ("SOFTWARE PRODUCT"). By installing or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this license agreement.

SOFTWARE PRODUCT LICENSE

The SOFTWARE PRODUCT is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The SOFTWARE PRODUCT is licensed, not sold.

1. GRANT OF LICENSE. This license agreement grants you the following rights:

- **Applications Software**. You may install and use the SOFTWARE PRODUCT, or in its place, any prior version for the same operating system, on as many computers as the number of licenses purchased. The primary user of the computer on which the SOFTWARE PRODUCT is installed may make a second installation for his or her exclusive use on a portable computer.
- **"Site License"**. A "Site License" allows unlimited use of the SOFTWARE PRODUCT at one campus/physical entity and allows all employees to install the SOFTWARE PRODUCT on their private computer. A "Site License" cannot be held by a private person. It is a license for educational institutions, music schools, companies and choirs.
- **"Home User Site License"**. A "Home User Site License" allows up to 200 students and employees at one campus/physical entity to install one copy of the SOFTWARE PRODUCT on their private computer if he/she:
  - has a printed copy of the "Home User Site License" agreement and
  - holds a valid ID that identifies the connection to the institution holding the "Home User Site License".

  A "Home User Site License" cannot be held by a private person. It is a license for educational institutions, music schools, companies and choirs. If a "Home User Site License" is held by a choir, it allows all choir members to install one copy of the SOFTWARE PRODUCT on a private computer.
  Notice! Computers owned by the holder of this license are not covered by this license. If the educational institution, music school, company or choir holding this license would like to install the SOFTWARE PRODUCT on own computers it will need a separate license for this.
- **Storage/Network Use**. You may also store or install a copy of the SOFTWARE PRODUCT on a storage device such as a network server, used only to install or run the SOFTWARE PRODUCT on your other computers over an internal network; however, you must acquire and dedicate a license for each separate computer on which the SOFTWARE PRODUCT is installed or run from the storage device. A license for the SOFTWARE PRODUCT may not be shared or used concurrently on different computers.

2. DESCRIPTION OF OTHER RIGHTS AND LIMITATIONS.

- **Rental**. You may not rent, lease, or lend the SOFTWARE PRODUCT.
- **Limitations on Reverse Engineering, Decompilation, and Disassembly**. You may not reverse engineer, decompile, or disassemble the SOFTWARE PRODUCT.
- **Software Transfer.** You may permanently transfer all of your right under this license agreement, provided you retain no copies, you transfer all of the SOFTWARE PRODUCT

(including all component parts, media and printed materials, any upgrades and this license agreement), **and** the recipient agrees to the terms of this license agreement. If the SOFTWARE PRODUCT is an upgrade, any transfer must include all prior versions of the SOFTWARE PRODUCT.

- **Not for Resale Software**. If the SOFTWARE PRODUCT is labeled "Not for Resale" then, notwithstanding other sections of this license agreement, you may not resell, or otherwise transfer for value, the SOFTWARE PRODUCT.

3. UPGRADES. If the SOFTWARE PRODUCT is labeled as an upgrade, you must be properly licensed to use a product identified by EarMaster as being eligible for the upgrade in order to use the SOFTWARE PRODUCT. A SOFTWARE PRODUCT labeled as an upgrade replaces and/or supplements the product that formed the basis for you eligibility for the upgrade.

4. COPYRIGHT. All title and copyrights in and to the SOFTWARE PRODUCT (including but not limited to any images, animations, audio, music and text incorporated into the SOFTWARE PRODUCT), the accompanying printed materials and any copies of the SOFTWARE PRODUCT are owned by EarMaster ApS. The SOFTWARE PRODUCT is protected by copyright laws and international treaty provisions. Therefore, you must treat the SOFTWARE PRODUCT like any other copyrighted material except that you may install the SOFTWARE PRODUCT within the limitations of this license agreement provided you keep the original solely for backup or archival purposes.

LIMITED WARRANTIES

LIMITED WARRANTY. Manufacturer warrants that the SOFTWARE PRODUCT will perform substantially in accordance with the accompanying user documentation for a period of 90 days from the date of receipt. Any implied warranties on the SOFTWARE are limited to 90 days. Some jurisdictions do not allow limitations on duration of an implied warranty, so the above limitation may not apply to you.

CUSTOMER REMEDIES. Manufacturer's entire liability and your exclusive remedy shall be, at Manufacturer's option, either (a) return of the price paid or (b) repair or replacement of the SOFTWARE PRODUCT that does not meet this Limited Warranty and which is returned to Manufacturer or the supplier serving your country with a copy of your receipt. This limited Warranty is void if failure of the SOFTWARE PRODUCT has resulted from accident, abuse, or misapplication.

NO OTHER WARRANTIES. Manufacturer and its suppliers disclaim all other warranties, either express or implied including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the SOFTWARE PRODUCT, the accompanying product manual(s) and written materials.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES. In no event shall Manufacturer be liable for any other damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use of or inability to use this product, even if Manufacturer has been advised of the possibility of such damages. In any case, Manufacturer's entire liability under any provision of this agreement shall be limited to the amount actually paid by your for the software. Because some jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply to you.

Should you have any questions concerning this agreement, or if you desire to contact us for any reason, please write to Manufacturer. Manufacturer is: EarMaster ApS, Egaa Havvej 21, DK-8250 Egaa, Denmark. E-Mail: info@earmaster.com

FAQ

There is no sound
Go to the *Tools* menu and choose *Program settings*. On the *Devices* tab you can choose among different Output-devices. Choose one from the list, set the volume to max and click the *Play* button. If this doesn't produce any sound, try to choose another from the list. At least one of them should produce some sound. If there are no devices on the list then you need to install drivers for your sound card or MIDI interface.
In some situations it can cause problems if more programs use MIDI at the same time. Please try to restart Windows and run EarMaster as the only program using MIDI. Please also make sure that the volume (attack) is correct in the sound profiles for Chords, Rhythm and Metronome. They are changed on the MIDI instruments tab in the EarMaster Program settings.

The sound is not good; the chords are muddy
EarMaster uses the MIDI sound in your sound card. Some sound cards can produce MIDI sound using different technologies, each with its own driver installed. Therefore first try to choose another MIDI device from the list in the Program settings.
If the sound is not acceptable, you must buy another sound card. A sound card with wave table technology will give you a better sound (see also "The sound is delayed" below).

The sound is delayed
A sound card with Wavetable technology can give you a very good sound quality for the MIDI instruments. It is however important that your sound card generates its instrument sounds from a hardware Wavetable, not a software Wavetable. Software Wavetable sound generation leads to annoying delays between pressing the spacebar, and hearing the sound.
EarMaster can compensate for the delay in your sound card. When you activate this compensation, EarMaster will use a wave file for the clap sound to avoid using the delayed MIDI sound in your sound card.
Choose the *Tools - Program settings* menu item and find the *MIDI devices* tab. Here you can *Synchronize rhythms* by adjusting the delay.
If the internal compensation is not acceptable or possible then the only solution is to buy another sound card.

MIDI IN does not work
To make MIDI in work, do the following:
1) In the EarMaster *Program settings*, choose the driver that should be used on the *Devices* tab. If no driver is listed then you need to install one that fits your sound card or MIDI interface.
2) Enable the MIDI in from the *Answer input* menu
3) Make sure that no other programs are running that use MIDI in. Sometimes Windows cannot handle if two programs want to use MIDI in at the same time.

Can I change the terminology (e.g. chord names) used in EarMaster?
Yes! All text in EarMaster can be changed. The file "English.lan" is a text file and contains all the English text strings in EarMaster. You can find the language files in the "Language" folder in the installation directory (e.g. c:\program files\EarMaster\Language). Just double-click the file to edit it with Notepad.

EarMaster keyboard shortcuts

This is a list of the keyboard shortcuts you can use in EarMaster.

Exercise control

Windows	*OSX*	
F5 or Alt+N	F3	New question
F6 or Alt+P	F4	Play/repeat question
F7	F5	Third button
F8	F6	Fourth button
F9 or Alt+S	F7	Stop
Ctrl+F7	⌘F7	Play tonic of key
Ctrl+Z or Delete	⌘Z or Delete	Undo
Ctrl or Insert	Ctrl	Insert the tone played/sung in the microphone

*You can also use the TAB and Arrow keys to choose a button. Press <Space> to click on the chosen button.

Options and functions

Windows	*OSX*	
Ctrl+T	⌘T	Tutor (toggle between Customized exercise and tutor)
F3	⌘F3	Customized exercise setup
Ctrl+R	⌘R	Statistics and Results
Ctrl+H	SHIFT ⌘H	High score
CTRL+O	⌘O	Open (exercise setup)
Ctrl+Alt+O	ALT ⌘O	Open (Tutor)
CTRL+S	⌘S	Save
CTRL+P	⌘P	Print
F5	F5	Refresh (results or user lists)
Ctrl+A	⌘A	Select all (chords or users)
Ctrl+D	⌘D	Deselect all chords
F11	⌘F11	Midi In (toggle)
Ctrl+F11	ALT⌘F11	Midi In remote control (toggle)
F12	⌘F12	Microphone (toggle)
Ctrl+F5	⌘F4	Auto new question (toggle)
Ctrl+F6	⌘F6	Auto replay question (toggle)
Ctrl+Left/right arrow	⌘ <Left/right arrow>	Chord progressions, move bar cursor

Note input

Windows	*OSX*	
-	-	Rubber
NUM 6	NUM 6	Whole note (semibreve)
NUM 5	NUM 5	Half note (minim)
NUM 4	NUM 4	Quarter note (crotchet)
NUM 3	NUM 3	Eights note (quaver)
NUM 2	NUM 2	Sixteenth note (semiquaver)

NUM 1	NUM 1	32nd note (demisemiquaver)
NUM 0	NUM 0	Rest toggle
.	.	Dotted toggle
*	*	Triplet toggle
/	/	Tied toggle
NUM 7	NUM 7	Flat
NUM 8	NUM 8	Natural
NUM 9	NUM 9	Sharp
		Add interval
1	SHIFT 1	Unison
2	SHIFT 2	Second above
		...
8	SHIFT 8	Octave above
9	SHIFT 9	Ninth above
SHIFT+2	⌘ 2	Second below
SHIFT+3	⌘ 3	Third below
		...
SHIFT+8	⌘ 8	Octave below
SHIFT+9	⌘ 9	Ninth below

Tutor editor

Windows	***OSX***	
CTRL+O	⌘O	Open
CTRL+S	⌘S	Save
Ctrl+L	⌘L	Lesson properties
Ctrl+N	⌘N	New lesson
CTRL+<Arrow up>	⌘<Arrow up>	Move lesson up
CTRL+<Arrow down>	⌘<Arrow down>	Move lesson down

EarMaster on the web
www.earmaster.com