

EARMASTER

User's guide

EarMaster School 4.0

EarMaster Pro 4.0

MidiTec

User's guide

EarMaster School 4.0
EarMaster Pro 4.0

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Support and troubleshooting



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

Installing EarMaster

Step 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.

Step 2

When 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.

Step 3

When the serial number is validated the installation begins. Follow the on screen instructions.

To install EarMaster School in a network, please find the network installation guide in appendix A.

Getting started with EarMaster

EarMaster offers 10 ear training exercise areas. They are listed in the "Exercises" menu. Each exercise consists of a number of windows which are chosen from the submenu to the exercise menu.

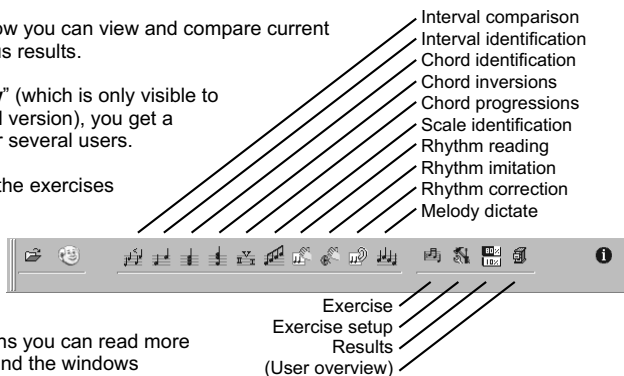
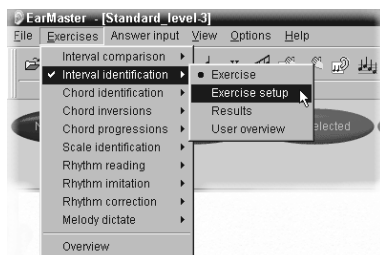
The "**Exercise**" window is where you do the exercises.

In the "**Exercise setup**" window you can make your own settings for the exercise. These settings can be saved in your own .ear level files.

In the "**Results**" window you can view and compare current results with all previous results.

In the "**User overview**" (which is only visible to teachers in the School version), you get a summary of results for several users.

You can also choose the exercises and the associated windows from the toolbar:



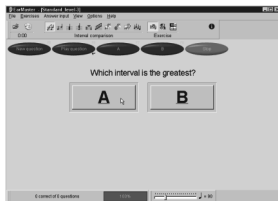
In the following sections you can read more about each exercise and the windows belonging to them.

Interval comparison

Which interval is the greater?

EarMaster plays two intervals randomly chosen from among the selected intervals.

Click on 'A' if the first of the intervals was greater or 'B' if the last was greater. The frame around the chosen answer will change color. Green if the answer is correct. Red if the answer is wrong.



Press 'Play question' to play the intervals again.

You can always get detailed information of your current results and compare it with previous results, in the "Results" window.

Related topics:

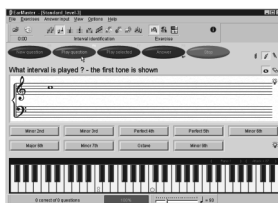
- 🔊 Setup chords, intervals and scales
- 🔊 Theory on Intervals

Identification of Intervals, Chords and Scales

The Chord, Interval and Scale exercises work the same way.

EarMaster plays a random chord chosen from among the selected chords and transposed to a randomly chosen key. Your job is to identify what was played.

Basically you can give your answer in two ways: either directly give the name of the chord or name each tone you heard. However, there are several ways you can do this (see frame on the next page).



Press:

'Play question' to play the question again.

'Play selected' to play your answer (the tones you have entered).

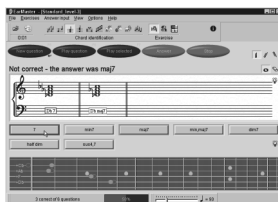
'Answer' when you have entered the tones and want EarMaster to evaluate your answer.

If your answer is wrong, EarMaster will indicate your answer with a red color and the correct answer with a green color.

You can always get detailed information of your current results and compare it with previous results, in the "Results" window.

Related topics:

- 🔊 Setup chords, intervals and scales
- 🔊 Theory on Intervals
- 🔊 Theory on Chords
- 🔊 Theory on Scales





Answer options

In the note based exercises (Interval, chords, melody, etc) you have several options for entering the answer. They are found in the "Answer input" menu, where you can show and hide each of them:

Notesheet - to enter a tone, press and hold the left mouse button. Move the mouse Up/Down to changes the tone, Right/Left to sharpen (#) or flatten (b) the tone. Click the right mouse button to cycle through different note values and the rubber (tie).

Name - Click once on the button with the name of the played tones (interval, chord, etc). Left click to select and play the tones without giving it as the answer to EarMaster. Right click to select the tones and give this as your answer.

Piano - Left click to select tones, right click to deselect tones. You can change the instrument sound and volume in the green display.

Guitar - Left click to select tones, right click to deselect tones.

Use the microphone to sing tones or clap rhythms. In the "Answer input" menu you can start and stop the microphone recording.

You can select tones and play rhythms on your external MIDI instrument. You can also assign special tones to special functions (like play the bottom C to press the New question button), to remote control EarMaster.

Chord progressions

EarMaster plays a chord progression. Your job is to identify the harmony functions (scale degrees) and quality of the chords that were played.

Basically you can give your answer in two ways: either directly give the name of the chord progression or give each chord you heard. In the "Answer input" menu you can show and hide the different answer options:

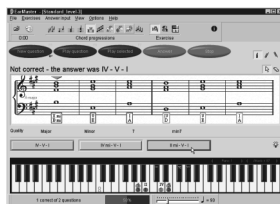
Notesheet - in this exercise you cannot use the note sheet to give your answer. Instead it is used to show your answer. Click in one of the bars to play the chord and to move the orange cursor to this bar.

Just below the notesheet you will find a panel where you can specify the quality of the chord. If you click on a chord in the notesheet (to move the orange pointer), you can change its quality on these buttons and hear the sound of it at the same time.

Name - Click once on the button with the name of chord progression. Left click to select and play the tones without giving it as the answer to EarMaster. Right click to select the tones and give this as your answer.

Piano - the harmony functions in the current key are shown on the piano. Left click to insert a chord in the position where the orange cursor is shown in the notesheet, right click to remove the chord. You can change the instrument sound and volume in the green display.

Guitar - the harmony functions in the current key are shown on the guitar. Left click to insert a chord in the position where the orange cursor is shown in the notesheet, right click to remove the chord.



Press

'Play question' to play the question again.

'Play selected' to play your answer (the chords you have entered).

'Answer' when you have entered the chords and want EarMaster to evaluate your answer.

If your answer is wrong, EarMaster will indicate your answer with a red color and the correct answer with a green color.

You can always get detailed information of your current results and compare it with previous results, in the "Results" window.

Related topics:

🔧 Setup chords, intervals and scales

Rhythm reading and Rhythm imitation

Rhythm reading: EarMaster shows a rhythmic score. You clap it following the metronome.

Rhythm imitation: EarMaster plays a rhythm. You repeat it following the metronome. After your first attempt you can choose to view the rhythm to support you in a second attempt.

You can either tap the rhythm on the space bar, play the rhythm on a MIDI instrument or clap into the microphone. Microphone recording is enabled in the "Answer input" menu.

In the rhythmic score you will see a symbol below each note:

- ✓ If the note was hit correctly.
- ↔ If you hit the note a bit too early.
- ⇒ If you hit the note a bit too late.
- ✗ If you did not hit the note at all.

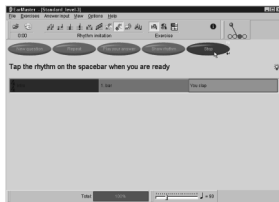
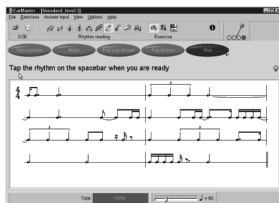
Notice: EarMaster also evaluates how precise the rhythm was clapped, so you might not get 100% even though you got all the notes.

You can always get detailed information of your current results and compare it with previous results, in the "Results" window.

The difficulty level and length of the rhythm can be set in the exercise setup.

Related topics:

🔧 Rhythm exercise setup



Rhythm correction

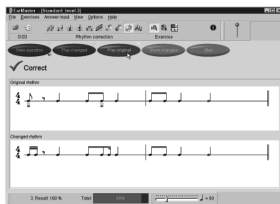
Find differences between a transcribed rhythm and a played rhythm.

EarMaster shows a rhythmic score. When you press 'Play changed', EarMaster will play the shown rhythm but with a few changes. Only three types of changes are possible:

- one note is divided into two notes.
- two notes are joined together.
- two notes are exchanged.

You select all the notes involved in the changes. A note is selected with a mouse click on it. A second click will deselect it.

When all notes are marked click 'Show changes'. This will show both the played rhythm and the correct selections.



You can always get detailed information of your current results and compare it with previous results, in the "Results" window.

The difficulty level and length of the rhythm can be set in the exercise setup.

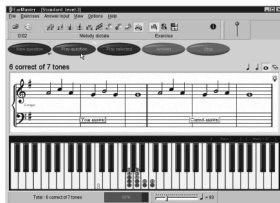
Related topics:

Rhythm exercise setup

Melody dictate

What tones are played?

EarMaster plays a phrase according to the settings in the setup. Your job is to identify which tones were played and transcribe them using the note sheet, piano or guitar (see the description in the "Identification of Intervals, Chords and Scales" section).



Press

'Play question' to play the phrase again.

'Play selected' to play your answer (the tones you have entered).

'Answer' when you have entered the tones and want EarMaster to evaluate your answer.

You can always get detailed information of your current results and compare it with previous results, in the "Results" window.

Related topics:

Setup Melody dictate

The options menu

The available options in the "Options" menu depends on the active exercise.

MIDI all notes off - send an All notes off controller message to the selected MIDI out device.

MIDI reset controllers - send an All Controllers Off message to the selected MIDI out device. This message set all controllers (like Hold pedal, Mod wheel, Effects, etc) to their default state.

MIDI remote - activate the MIDI in remote control of the exercises. Each button is assigned to a MIDI tone as specified in the Program settings.

Automatic new question - if checked you will automatically get a new question when you have answered a question. In the Program settings, you can set the delay in seconds and other options.

Show metronome - activate the visual metronome.

Play metronome - activate the metronome sound.

Rhythm with metronome - enable metronome sound while a rhythm is played. This does not influence the metronome sound in the lead in count and while answering the rhythm.

Note identification - specify how EarMaster should interpret your answer. *Absolute*: You must enter the tones exactly as they were played, *Any octave*: You must enter the same tones, but you may transpose them 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).

Show keyname - if checked, Earmaster will show the name of the key in the note sheet. This option is only available if the "Show key signature" option is enabled in the exercise setup.

Setup chords, intervals and scales

The tone setup panel - click to include/exclude the element (chord, interval, etc) in the exercise. The first elements (red text) are predefined and cannot be edited, but below those you can add your own. If the text is green, the name and tones can be edited.

Root movement - set an upper and lower limit for the root and specify how the root should be chosen within this limit.

Playstyle - choose how you would like the tones to be played: Harmonic, Melodic up, Melodic Down. If several are selected, the style will be chosen randomly.

Auto answer - EarMaster will automatically press the Answer button when the correct answer is selected.

Common tone - the two intervals will be played with the same root tone.

Show first tone - EarMaster will select the first tone (or bottom tone in harmonies) of the answer for you.

Show Key signature - choose whether the key signature should be shown permanent instead of adding sharps and flats for each note.

Play tone on click - enable sound on the piano, guitar and note sheet.

Play tonic - play some tones before the question to put you into the tonality.

Diatonic roots - the interval is transposed within the key so that it will always consist of diatonic tones.

Inversions - choose how the chords are inverted:

- 1) All chords in root position
- 2) Last chord in root position. The preceding chords will be inverted to a position with the top tone closest to the top tone of the last chord.
- 3) Random inversion of last chord. The preceding chords will be inverted to a position with the top tone closest to the top tone of the last chord.

Add root basstone - adds the root tone of the chord at the bottom.

Lock answerinput - to control how the user answers the questions, e.g. when making a tutor.



Related topics:

- Interval comparison
- Identification of Intervals, Chords and Scales
- Chord progression identification

Rhythm exercise setup

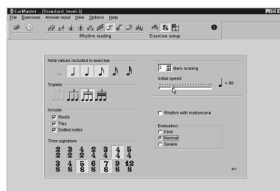
The rhythms are generated by EarMaster using an intelligent algorithm according to the selections described below.

Click to include:

- specific note values and triplets in the rhythm.
- rests and dotted notes. The note values are the same as selected above.
- tied notes.

Choose:

- the time signature of the rhythm.
- the number of bars in a row.
- the speed of the rhythm (beats per minute).



Corrections - specify the maximum number of changes to be made in each question.

Show rhythm second time - shows the rhythm automatically when you have finished clapping. This will remain visible to support you if you make a second attempt.

Evaluation - choose how precise the rhythm has to be clapped. On Kind a general idea of the rhythm is enough while on Severe you must be very precise and have a sharp rhythmic 'feeling'.

Related topics:

- ☞ Rhythm imitation
- ☞ Rhythm reading
- ☞ Rhythm correction

Setup Melody dictate

The melody phrases are generated by EarMaster using an intelligent algorithm according to the selections described below:

Tones - the length of the phrase.

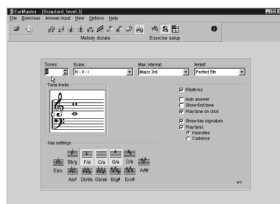
Scale/progression - choose a scale, mode or chord progression to base the melodic phrase on.

Maximum interval - the maximum interval between two adjacent tones.

Ambit - the maximum interval from the lowest tone in the phrase to the highest tone in the phrase.

Tone limits - the total area in which the phrases can be placed.

Key signatures - the key signatures in which the phrase will be generated.



Rhythms - Include rhythmic values in the melodic phrases. When answering a question you need to transcribe both the pitch and the note length. Only whole, half and quarter notes will be included.

Auto answer - EarMaster will automatically press the Answer button when the correct answer is selected.

Show first tone - EarMaster will select the first tone (or bottom tone in harmonies) of the

answer for you.


Show Key signature - choose whether the key signature should be shown permanent instead of adding sharps and flats for each note.

Play tone on click - enable sound on the piano, guitar and note sheet.

Play tonic - play some tones before the question to put you into the tonality.

Lock answerinput - to control how the user answers the questions, e.g. when making a tutor.

Related topics:

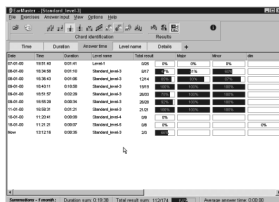
 Melody dictate

Results

In the Results window you can view and compare all results from the currently selected exercise area.

With the top buttons you can turn on and off the elements you want to view:

- Date and time where the exercise was started.
- Duration - the total time this exercise has been active (visible)
- Answer time - the total time you spend on thinking what the answer was and answering the question. This is the sum of time from each question has been set until you answered it.
- Level name - the name of the exercise file or the tutor-step.
- Details - specific results for each chord/interval.



Date	Duration	Level name	Details	View
2012-05-01 10:00:00	0:00:00	Level 1	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_1	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_2	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_3	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_4	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_5	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_6	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_7	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_8	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_9	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_10	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_11	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_12	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_13	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_14	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_15	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_16	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_17	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_18	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_19	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_20	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_21	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_22	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_23	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_24	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_25	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_26	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_27	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_28	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_29	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_30	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_31	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_32	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_33	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_34	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_35	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_36	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_37	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_38	100%	100%
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2012-05-01 10:00:00	0:00:00	Exercise_40	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_41	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_42	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_43	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_44	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_45	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_46	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_47	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_48	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_49	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_50	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_51	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_52	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_53	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_54	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_55	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_56	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_57	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_58	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_59	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_60	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_61	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_62	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_63	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_64	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_65	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_66	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_67	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_68	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_69	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_70	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_71	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_72	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_73	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_74	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_75	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_76	100%	100%
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2012-05-01 10:00:00	0:00:00	Exercise_78	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_79	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_80	100%	100%
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2012-05-01 10:00:00	0:00:00	Exercise_85	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_86	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_87	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_88	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_89	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_90	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_91	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_92	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_93	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_94	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_95	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_96	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_97	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_98	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_99	100%	100%
2012-05-01 10:00:00	0:00:00	Exercise_100	100%	100%

Notice: results are only saved if you have answered at least 5 questions. Every time results are reset, you have the option to save the results or not to save the results.

In the status panel at the bottom, you can view summation statistics for a time period. You can change the time period in the "View" - "Result summations" menu.

The "Average answer time" is the average for each question - so a few seconds should be enough...

The EarMaster Tutor

The EarMaster tutor will lead you through a variety of graded ear training exercises and will challenge you according to your skills. It can also be replaced by other tutors made with the tutor editor in EarMaster School.



To start the tutor, choose "Tutor" from the "File" menu. When you have answered a number of questions, the tutor will evaluate your result and suggest either to advance to the next step, repeat the step once more or to go back to the previous step.

You can jump among all 10 exercises in EarMaster and come back to the tutor where you left off. You can stop the tutor anytime by choosing "Tutor" from the "File" menu once again.

Notice: You cannot go to the exercise setup while a tutor is running. Also, to edit a tutor or create a new one, you need the tutor editor which is only included in "EarMaster School" and the tutor editor is only available if you have teacher or administrator rights.

Import and export of user results

With the import/export function in the "File" menu you can import and export assignments (tutor) and results to and from a diskette. Then you can export your results and import them on another computer, e.g. if your teacher wants to view the result of your homework.

The typical use of this function would be when the school has EarMaster School 4 installed and students also have any edition of EarMaster 4 installed at home:

1. A teacher creates an exercise course or some assignments and puts them in a tutor. (only in EarMaster School)
2. The tutor is assigned to a class or individual users. (only in EarMaster School)
3. Each user exports the settings to a diskette before he/she goes home from school.
4. The student imports the exercise at home.
5. Before going to the next music class, the student exports the result to a diskette and imports it at the school.
6. The teacher can view, compare and print the homework results of his class. (only in EarMaster School)

Using the microphone

EarMaster offers you to use a microphone to clap, sing or play answers on your favorite instrument. Using a microphone makes ear training more interactive - and fun!

No special hardware is required. Just plug a microphone into your sound card.

EarMaster uses advanced Sound-2-midi technology to analyze the input from the Microphone.

Pitch input

Wave-to-MIDI can listen to your singing and work out which note you have sung. However recognizing the correct pitch depends very much on the overtones of your voice or instrument. Sometimes an overtone is stronger than the fundamental tone and then it will be the overtone EarMaster recognizes.

Older computer processors may not have enough processing power to use the microphone pitch recognition. If you haven't enough processor power you may not get reliable results.

Rhythm input

In the rhythm reading and rhythm imitation exercises you can clap the rhythm in the way you are used to and prefer: with your hands or with a drum.

As background noise, microphone sensitivity and sound card amplification can vary a lot, you might need to adjust the Rhythm input sensitivity in the program settings to get optimum results on your system.

Setting up the Microphone in the Windows mixer

In the Windows mixer, the microphone device needs to be selected for recording. Load the mixer by double clicking on the speaker icon in the Windows task bar. Change to recording properties by selecting Properties from the Options menu, and then selecting "Adjust volume for: recording." The Microphone device should be checked (have a tick next to it), in the list of volume controls. Then press OK. The "Select" box for the microphone device must be checked; if it is not, click on "Select" to check it.

Theory on intervals

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 dictate 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.

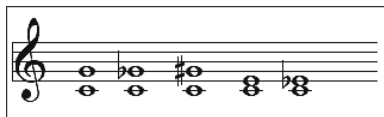


The quality can be Perfect, Diminished, Augmented, Major, or Minor.

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, diminished and augmented fifth and a major and minor third.



In EarMaster you can hear the intervals in the Interval identification exercise when you click on the button with interval name on it. Notice, "by name" must be enabled in the "Answer input" menu to do this.

You can also hear the intervals when you right click on them in the exercise setup.

Recognizing intervals

There are two common ways of recognizing intervals:

1. Use the opening of a well known song. Find songs that begins with each of the Intervals. When you hear the interval you will make the connection between the interval and the song. See examples of template melodies in the next section.

This method is however criticized because it doesn't consider the function of the interval within the key i.e. the perfect fourth from C to F has a different function (sound) in the C major key and the F major key and therefore this method will be difficult to use when doing sight reading.

2. Sing up and down a scale to find the matching interval. This method is closely related to the solmization system (using the syllables do, re, mi, fa, sol, la, ti, do) which is often used when learning sight reading. EarMaster shows the solmization syllables in brackets when entering notes in Interval identification and Melody dictate.

Related exercises in EarMaster:

Interval comparison

Interval identification

Template melodies for intervals

These are examples of songs you can use to recognize specific intervals

Minor 2 nd	Isn't she lovely (Stevie Wonder)
Major 2 nd	Happy birthday, Strangers in the night
Minor 3 rd	Georgia on my mind
Major 3 rd	Morning has broken
Perfect 4 th	Amazing graze, Love me tender
Tritone	Maria (West side story)
Perfect 5 th	Wise men say (Can't help falling in love)
Minor 6 th	When Israel Was In Egypt's Land
Major 6 th	NBC theme
Minor 7 th	Somewhere (West side story)
Major 7 th	Bali Hai (South Pacific) 3rd note
Octave	Somewhere over the Rainbow

Theory on scales and modes

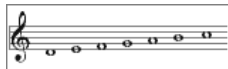
"Scale" means ladder in Latin. A scale is the tonal basis of music i.e. a set of tones from which you build melodies and harmonies. The tones in the list are arranged in order of their pitch. Since this tonal basis varies in different periods and countries there are a large number of scales.

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 look 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 semi-tones.

In EarMaster you can hear the scales in the Scale identification exercise when you click on the button with the scale name on it. Notice, "by name" must be enabled in the "Answer input" menu to do this.

You can also hear the scales when you right click on them in the exercise setup.

Related exercise in EarMaster:

 Scale identification

Theory on chords

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

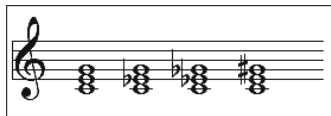
Triads

A chord of three notes consisting of a root and the third and fifth above it.

- 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

The first two are called consonant and the last two dissonant chords.

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.

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

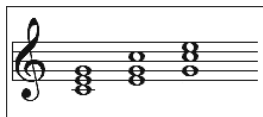
There are more triad+7th combinations than mentioned here. You can find them in the chord definition table in the exercise setup of the Chord Identification exercise.

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.

Below is shown the C major chord in root position, 1. inversion and 2. inversion:



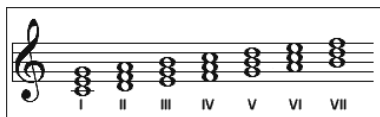
Chord progressions

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 exercises in EarMaster:

- Chord identification
- Chord inversion identification
- Chord progression

Tutor editor

(Only available for teachers in EarMaster School)

With this function you can setup a complete ear training course once, and for all. It can easily be distributed to other computers. A tutor is actually a set of exercise setups. To define a tutor, you simply make a list of exercise setups, add titles and descriptions to each of them and define how well a student must perform to advance to the next exercise setup (step) in the list. In the step-list you see all defined steps in the current exercise. The steps are defined separately for each exercise.

Add steps

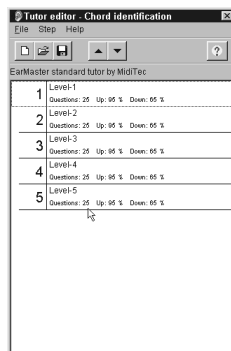
Right click in the step-list to add and remove steps, and to edit properties of the selected step. You can find additional help in the corresponding windows.

You can easily verify the progression of the steps: Click once on each step and view its settings in the exercise setup window.

Edit step

To change the texts and percentage rate, you can either right click on the step and choose properties from the menu or simply double-click the step.

The exercise setup for the step can also be edited: click once on the step to update the exercise setup window with the setup from this step. When you have made the needed corrections in the exercise setup window, right-click the step in the step list and choose “Update from setup window”. This will save the setup to the step.



Insert tutor

To insert steps from another tutor, find the “Insert tutor” function in the “File” menu. This will append all the steps from the selected tutor to the end of the step list in the current tutor. The steps are only added to the step list in the selected exercise, the step lists in the other exercises are not affected.

When the steps have been added, you can drag them with the mouse to the positions where you want them.

Userdefined chords

If you define new chords while you are in tutor edit mode, they are only defined for this specific tutor. They are loaded and saved together with this tutor.

When you exit the tutor edit mode, EarMaster loads the set of chords that was available before you entered the tutor edit mode.

This means you can define new chords for a specific tutor without affecting the normal set of user defined chords.

Users overview

(Only available for teachers in EarMaster School)

With the user-list window you can view all users or a group of users and a summary of their settings and results.

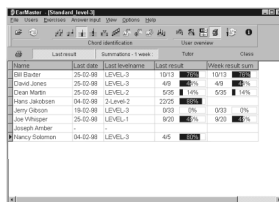
The result summary is calculated for the selected exercise.

You can change the summary time period in the menu

“View” - “Result summations”.

To refresh and recalculate all user results, choose

“Refresh” in the “View” menu.



Name	Last date	Last leveltime	Last result	Result summary
Bill Bander	25-02-99	LEVEL-3	1013	1013
David Jones	25-02-99	LEVEL-3	45	45
Clean Martin	25-02-99	LEVEL-2	505	505
Hans Jakobson	04-02-99	2-Level-2	2025	2025
Jerry Wilson	18-02-99	LEVEL-3	000	0%
Joe Vilhapper	25-02-99	LEVEL-1	920	920
Joseph Andler	04-02-99	LEVEL-3	45	45

Right-click in the user-list for a menu to add and remove users, and to set properties for a user.

This can also be done from the main-menu “Users” where you, in addition, can choose the “View list” to view a group of users.

Users are grouped together by putting them in a Class.

To view detailed results for a single user, go to the “Results” section for the exercise.

To view and print selected detailed results for several users, press the printer button to invoke the report generator.

Class configuration and maintenance

(Only available for teachers in EarMaster School)

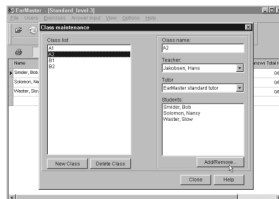
A class enables you to group a number of users together. It is needed when you want to view or print user results from a selected subset of all users.

To create a new class:

Choose “Class maintenance...” from the “File” menu. Press the “New” button. Give the class a name, attach a teacher and eventually a tutor to it. Press “Add/Remove...” to connect students to the class.

Notice: deleting a class will not delete the users from the system. It will only disconnect the users from the class.

Classes are used with the reports function and the Users overview function.



Appendix A

Installing EarMaster School in a network

1) Install EarMaster on the server

We *recommend* that you install EarMaster School on the server. A more *advanced* solution is to install EarMaster School on a client computer (step 2) and then just copy the "EarMaster School\Data\" directory to the server. This has to be done before you run EarMaster the first time (step 3).

We *strongly recommend* that all computer save users settings and results in one place (on the server). Then users only have to be added to the system once, and all computers with EarMaster installed will remember settings and results for each user.

2) Install EarMaster on the classroom computer (called a "client")

Now you are ready to install EarMaster on your first client computer. We *recommend* that you install it from <http://www.earmaster.com/download/Earscl4rsetup.exe> but you can also install directly from the CD-ROM.

Tip: It will make life a little easier for you if you copy the CD-ROM to the server and install it from there.

3) Running EarMaster School the first time

When running EarMaster the first time you will be asked three questions:

Question I: You are asked if installation should work together with another computer in a network - answer **Yes!**

The next screen will ask for location of the files. Find the \Data\ directory on the server and press Ok. Don't worry about doing something wrong - you can change this later (see step 4).

Question II: Secondly you will be asked if EarMaster should use the Windows login to identify users. If all users have their own login in Windows - Answer **Yes!**

EarMaster will then get this username from Windows to identify what user settings to load. If you answer **No**, EarMaster will show a login window every time it is started (see step 5).

Question III: Finally you will be asked to add an "Administrator" user in EarMaster.

If you answered **No** in Question II you must remember the username and password entered here because only the Administrator can give other users "Teacher" and "Administrator" rights.

If you answered **Yes** in Question II then you cannot enter a username and password. Instead EarMaster will create the Administrator with the same username as the current Windows username.

Note: Question III should only be asked once for the whole network system. If a new client asks for an "Administrator" again then this client has not been configured correctly (see Question I).

4) Check that all client installations share the same server files

It is *very* important that you verify that *all* computers use the \Data\ directory on the server before you are trying other networking and user administration features in EarMaster. To check the settings for the \Data\ directory for each client please go to "Options" and then

select "Administration" in the EarMaster program. In "Datafiles" tab verify that it points to the `\Data\` directory on the server.

When you install EarMaster School on a client it will always install a local set of the data files in the `\Data\` subdirectory. To avoid confusion we *recommend* that you remove the `\Data\` directory from all client computers, and only keep the files on the server.

5) Using Windows login

If each user of the network have their own login to Windows then there is no need to type it again when running EarMaster. Go to "Administration" in EarMaster (in the "Options" tab) and enable "Use Windows login". EarMaster will then automatically login with your Windows username.

The user must be created as a user in EarMaster and the username in EarMaster must be the same as the one you use for Windows login. If "Allow new users" is enabled in the "Options" tab then the user will be created automatically the first time the users runs EarMaster.

6) Adding students & assigning user rights

New users can add themselves to EarMaster. Even when using the Windows login they still have to be created as users in EarMaster. New users that are added to EarMaster always have "Student" rights with the fewest possible rights. By default new users can NOT:

- change the tutor and beginning level that have been assigned to them. (If no tutor has been assigned to the student by a teacher then the tutor cannot be used at all.)
- go to the exercise setup where individual configurations are made.
- make user defined chords, intervals and scales.
- access the "Program settings" in the Options menu.

These rights have to be given to the student afterwards by a Teacher or an Administrator. User rights and other user properties (like username) can be changed for any user in the "User overview" screen. Only the Administrator can give other users "Teacher" and "Administrator" rights.

7) Make a shared folder for shared exercise files

If a teacher makes exercise setups or tutors that are assigned to students or should be accessible by students then they must be saved in a shared folder that can be accessed by all computers.

The administrator must tell EarMaster where the shared folder is. In the Options - Administration window on the Options tab, you can enter the "Common files directory". Notice that the path you enter is read by all computers. Therefore it must be entered in a way that is valid for all computers using EarMaster.

If the drive name to the shared folder is not the same on all computers you must instead use the format: `\\computername\sharename\path`

Appendix B

LICENSE AGREEMENT FOR EARMMASTER SOFTWARE

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

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CUSTOMER REMEDIES. MidiTec's entire liability and your exclusive remedy shall be, at MidiTec's option, either (a) return of the price paid or (b) repair or replacement of the SOFTWARE PRODUCT that does not meet MidiTec's Limited Warranty and which is returned to MidiTec 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.

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Should you have any questions concerning this agreement, or if you desire to contact MidiTec for any reason, please write: MidiTec, Vegavaenget 26, DK 2620 Albertslund, Denmark.
www.earmaster.com

Appendix C

FAQ (Frequently asked questions)

There is no sound?

Go to the "Options" menu and choose "Program settings". On the "Devices" tab you can choose among different Output-devices. Choose one from the list, press OK and try one of the exercises. If this doesn't produce any sound, try to choose another from the list. At least one of them should produce some sound.

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 is set to max both the Windows MIDI volume and the EarMaster volume setting for Chords, Rhythm and Metronome. All of them can be changed in the EarMaster Program settings.

It doesn't sound very good, the chords are muddy - why?

EarMaster uses the sounds in your sound card. A sound card with wave table technology will give you a better sound. The best solution is to use a dedicated MIDI module.

The clap sound is delayed in the rhythm exercises - why?

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.

Solutions:

1) EarMaster can compensate for some of the problems caused by the delay in your sound card, except the sound from the spacebar. If you can live without the clap sound from the spacebar then you can use this compensation. Choose the "Options" - "Program settings" menu item and find the "Devices" tab.

Here you can "Synchronize rhythms" by adjusting the delay.

2) Many sound cards also includes a MIDI driver based on FM synthesis. The sound quality is lower but there is no delay. You can try to change the MIDI output device in the EarMaster 'Program settings'.

3) If none of the above solutions are acceptable or possible then the only solution is to buy another sound card.

Can't get into the exercise setup - why is it disabled?

When the EarMaster Tutor is enabled it controls the exercise setup and then you cannot access it. To enable the exercise setup you need to stop the tutor: Go to the "File" menu remove the checkmark next to "Tutor".

How do I add sharps (#) and flats (b)?

To add sharps and flats to the note sheet, click with the mouse on the sheet and hold down the mouse button while you move the mouse right (#) or left (b)

Keyboard shortcuts in EarMaster

Many features in EarMaster can be controlled from the keyboard.

Ctrl + 1	Interval comparison
Ctrl + 2	Interval identification
Ctrl + 3	Chord identification
Ctrl + 4	Chord inversion identification
Ctrl + 5	Chord progression
Ctrl + 6	Scale identification
Ctrl + 7	Rhythm reading
Ctrl + 8	Rhythm imitation
Ctrl + 9	Rhythm correction
Ctrl + 0	Melody dictate
Shift + 1	Exercise
Shift + 2	Exercise setup
Shift + 3	Results
Shift + 4	User overview (Only teachers in EarMaster School)
F1	Help
Ctrl + F1	Context Help
F2	Load exercise setup
F3	Save exercise setup
F4	Tutor
Shift + F4	Tutor editor (Only for teachers in EarMaster School)
F5	New questions
F6	Play/Repeat question
F7-F8	Depends on specific exercise
F9	Stop
Shift + F9	MIDI all notes off
Ctrl + F9	MIDI reset controllers
Ctrl + F12	MIDI remote control
Ctrl + M	Metronome sound (On/Off)
F10	Print results
F11	Class maintenance (Only for teachers in EarMaster School)
Shift + F2	Auto new question (On/Off)
Shift + F5	Answer by Notesheet
Shift + F6	Answer by name
Shift + F7	Answer by Piano
Shift + F8	Answer by Guitar
Shift + F11	Microphone input (On/Off)
Shift + F12	MIDI in (On/Off)
On the staff, sharps and flats can be added from the keyboard while holding the left mouse button:	
z	bb (double flat)
x	b (flat)
c	(natural sign)
v	# (sharp)
b	x (double sharp)
Ctrl + Delete	Restart current exercise