

# Music Intervals Trainer Manual

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## Introduction

The operation of this [Music intervals trainer](#) is a very simple task; however, the writing of this small manual has been considered useful.

The benefit that the user can get from this trainer depends on his knowledge of the theory associated with music intervals. The [Music Intervals](#) page of iMusicMate.com gives an introduction to its basics. It proposes some experiments that can be carried out in this trainer.

## Description of the Musical Intervals Trainer

This trainer's window consists of three main areas:

The interface consists of three main areas:

- Play control:** A button labeled "Play" and a text prompt "Click to hear the intervals."
- Note selection:** A row of 13 buttons representing notes from C4 to C5. The notes are: 0 (C4, red), 1 (C#4, grey), 2 (D4, yellow), 3 (D#4, grey), 4 (E4, green), 5 (F4, cyan), 6 (F#4, grey), 7 (G4, blue), 8 (G#4, grey), 9 (A4, purple), 10 (A#4, grey), 11 (B4, pink), 12 (C5, red).
- Control panel:**
  - Listen to intervals:** Three radio buttons for "Ascending melodic" (filled red), "Descending melodic" (empty white), and "Harmonic" (empty white).
  - Identify intervals:** A grid of 13 columns (0-12) and 3 rows. The first row contains 13 empty boxes. The second row contains interval labels: 0, 1A, 2M, 2A, 3M, 4P, 4A, 5P, 5A, 6M, 6A, 7M, 8P. The third row contains interval labels: U, 2m, 3d, 3m, 4d, 3A, 5d, 6d, 6m, 7d, 7m, 8d, 7A.
  - Repeat:** A button.
  - Verify:** A button.

At the top left is the Play control, which will activate the playback of the intervals.

In the middle part there are thirteen buttons showing the twelve notes used in Western music, in the interval from C4 to B4, and the note C5 located one octave away from the note C4. Colors have been used for the natural notes; these notes as a whole constitute a major scale of C. Altered notes are indicated in grey, but can be used in the same way as natural notes. Initially, the buttons

for C4 and D4 are selected, so clicking the Play button will play the major second interval made up of these notes.

At the bottom are the various controls, labels, and buttons, which adjust the operation of the trainer. To the left are three buttons, grouped under the Listen to Intervals tab, which allow controlling the playback mode of the intervals. To the right are the labels and buttons that allow selecting the intervals to be trained.

## **Familiarization with intervals**

The first phase of interval recognition training is the familiarization with intervals. This is done using the Listen to Intervals option located in the lower-left part of the trainer window, in which the Ascending melodic intervals are selected by default. Familiarization with this type of interval should be considered first, as it is the most useful when tuning string instruments; in particular, the major third (four semitones), perfect fourth (five semitones) and perfect fifth (seven semitones) intervals are used when tuning several of these instruments.

To become familiar with a particular interval, the following steps must be followed:

1. Select the task Listen to intervals by clicking on the corresponding label, which should adopt the cream color.
2. Select the button corresponding to the type of interval with which you want to familiarize yourself.
3. In the horizontal row of large round buttons in the middle part, select the two buttons that define the with which want to become familiar with. To delete a previously selected button, click on it.
4. Click the Play control at the top left.

In the following figure all the preparations have been made to identify an ascending interval of perfect fourth:

0 C4 1 C#4 Db 2 D4 3 D#4 Eb 4 E4 5 F4 6 F#4 Gb 7 G4 8 G#4 Ab 9 A4 10 A#4 Bb 11 B4 12 C5

Listen to intervals Identify intervals Repeat Verify

Ascending melodic  
Descending melodic  
Harmonic

0	1	2	3	4	5	6	7	8	9	10	11	12
U	1A	2M	2A	3M	4P	4A	5P	5A	6M	6A	7M	8P
U	2m	3d	3m	4d	3A	5d	6d	6m	7d	7m	8d	7A

During the playback of the interval chosen for familiarization, the buttons corresponding to its notes will temporarily change to brown.

## Training in interval recognition

The second phase of interval recognition training is to check that sufficient familiarization with the chosen intervals has been achieved in the previous phase to be able to recognize them.

To verify that you are sufficiently familiar with a group of intervals, you must follow the following steps:

1. Select the Identify Intervals task at the bottom right of the trainer. Clicking this label will take a cream color, and the Listen Intervals label will turn yellow.
2. Select in the row of 13 square boxes that appear below the Identify intervals label the intervals you want to reproduce in the identification process; the corresponding boxes will change to brown. Note: all intervals are with respect to note C4.
3. Click on the Play control; one of the selected intervals will be played. The first note you will hear will always be the C4 note, and the second one will correspond to one of the selected intervals. Unlike what happens in the Listening intervals mode, in this identification mode the trainer will not show any indication of the notes being played; your task is to identify the note corresponding to the sound of the second note played.
4. Repetition of the interval to be identified. At the beginning of the training you will not normally have the security of having correctly identified an interval; therefore the trainer gives you the option to reproduce it as many times as you want until you are reasonably sure of your choice.

To do this, you must click on the Repeat label, which is located to the right of the Identify intervals label; the Repeat label will then change to cream color.

As you progress in your training, you will gain confidence in your ability to recognize intervals and you will be able to do without this step most of the time.

5. Identification Verification You can click on one of the thirteen large round buttons in the middle row to indicate the second note of the interval issued; however, the trainer will not provide any indication of the correctness of your choice. The only possible verification is to press the Verify label that is to the right of the Repeat label; The trainer will then display in brown the correct note in the row of round buttons.

The following figure shows the final result of an identification process in which the user has chosen the unison, major third and perfect fifth intervals for his training, has identified the interval reproduced as a perfect fifth, and when verifying his choice the coach has indicated that the interval is actually the major third. In this figure have been identified the steps in the previous list:

Play Click to hear the intervals.

3, 4

5

1

2

4

0	1	2	3	4	5	6	7	8	9	10	11	12
C4	C#4 Db	D4	D#4 Eb	E4	F4	F#4 Gb	G4	G#4 Ab	A4	A#4 Bb	B4	C5

Listen to intervals Identify intervals Repeat Verify

Ascending melodic  
 Descending melodic  
 Harmonic

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10	11	12
U	1A	2M	2A	3M	4P	4A	5P	5A	6M	6A	7M	8P
U	2m	3d	3m	4d	3A	5d	6d	6m	7d	7m	8d	7A

NOTE: this trainer could have been designed to give an immediate indication of the correctness of the identification and the possibility of trying again until the correct identification is achieved; but it was considered that this is permissive with careless use of it, while the chosen design forces to pay attention. Depending on the response of users to this design, the possibility of choosing between both options may be provided in the future.