

An Introduction to *InTune*

(Version 1.0 Beta-testing)

InTune is a free software program which gives visual feedback on intonation for musicians.*

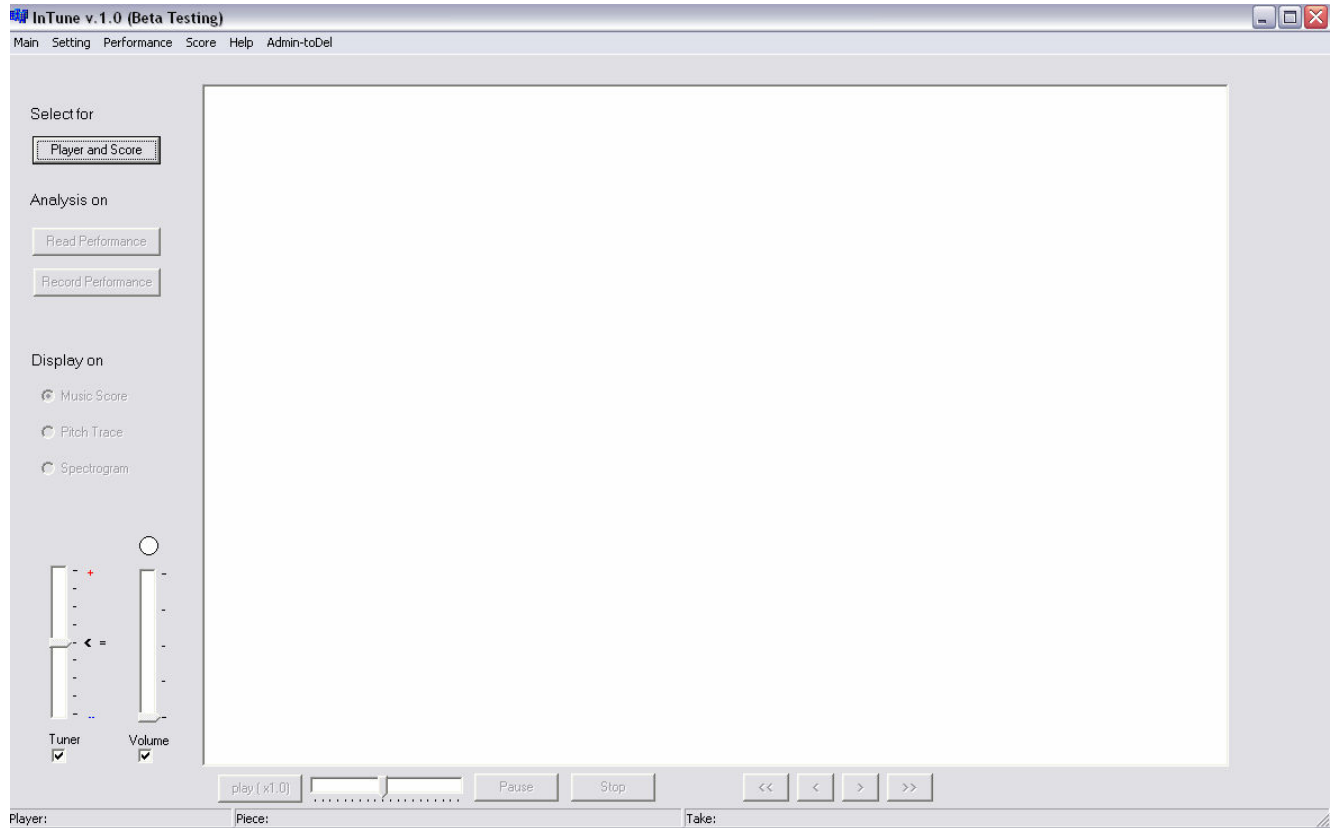
It is developed by Kyung Ae Lim and Prof. Christopher Raphael at School of Informatics

and consulted by Profs. Allen Winold and Helga Winold at Jacobs School of Music,

Indiana University Bloomington, U.S.A, 2008-2009.

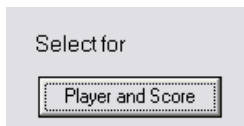
* Mainly designed for musicians playing monophonic instruments with occasional polyphonic sections (ex. double stops).

0. Initial Window

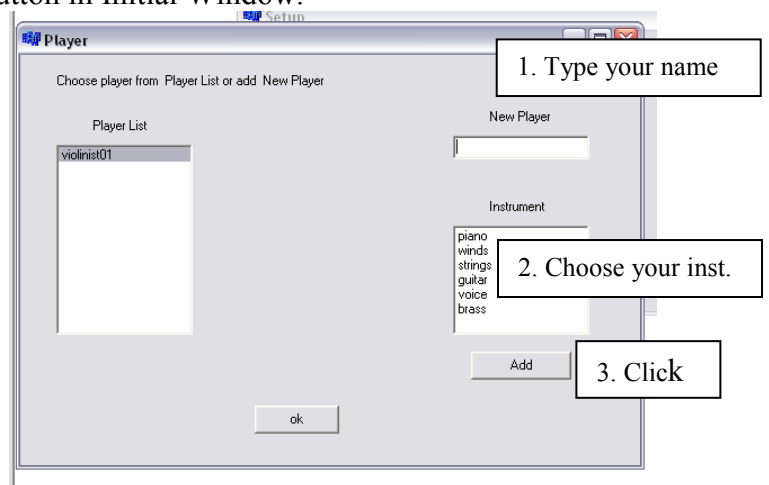
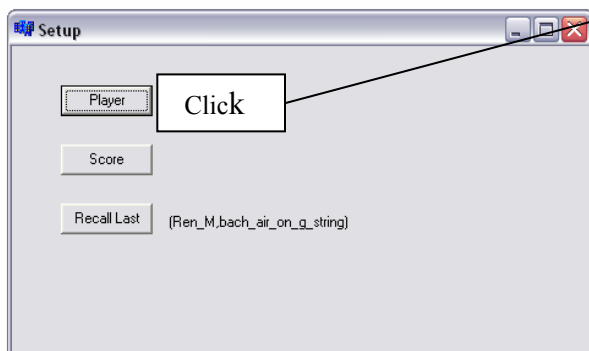


To get general help while using *InTune*, move your mouse cursor to any activated buttons and read help texts.

1. Register a new player



Click "Player and Score" button in Initial Window.

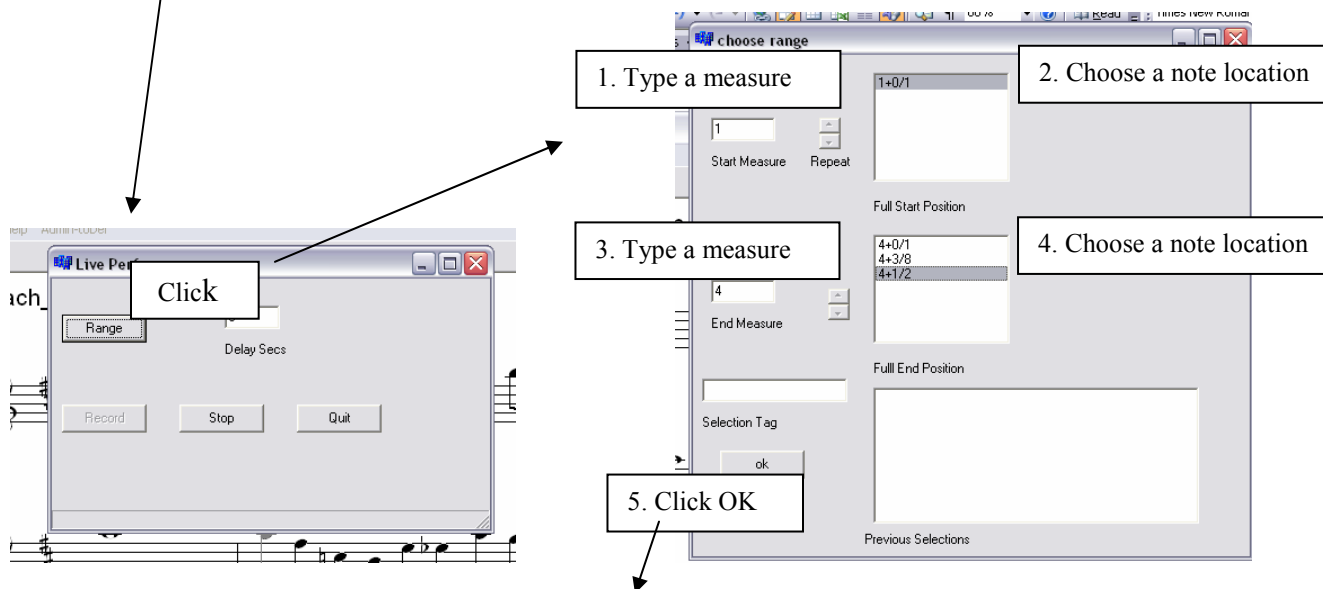
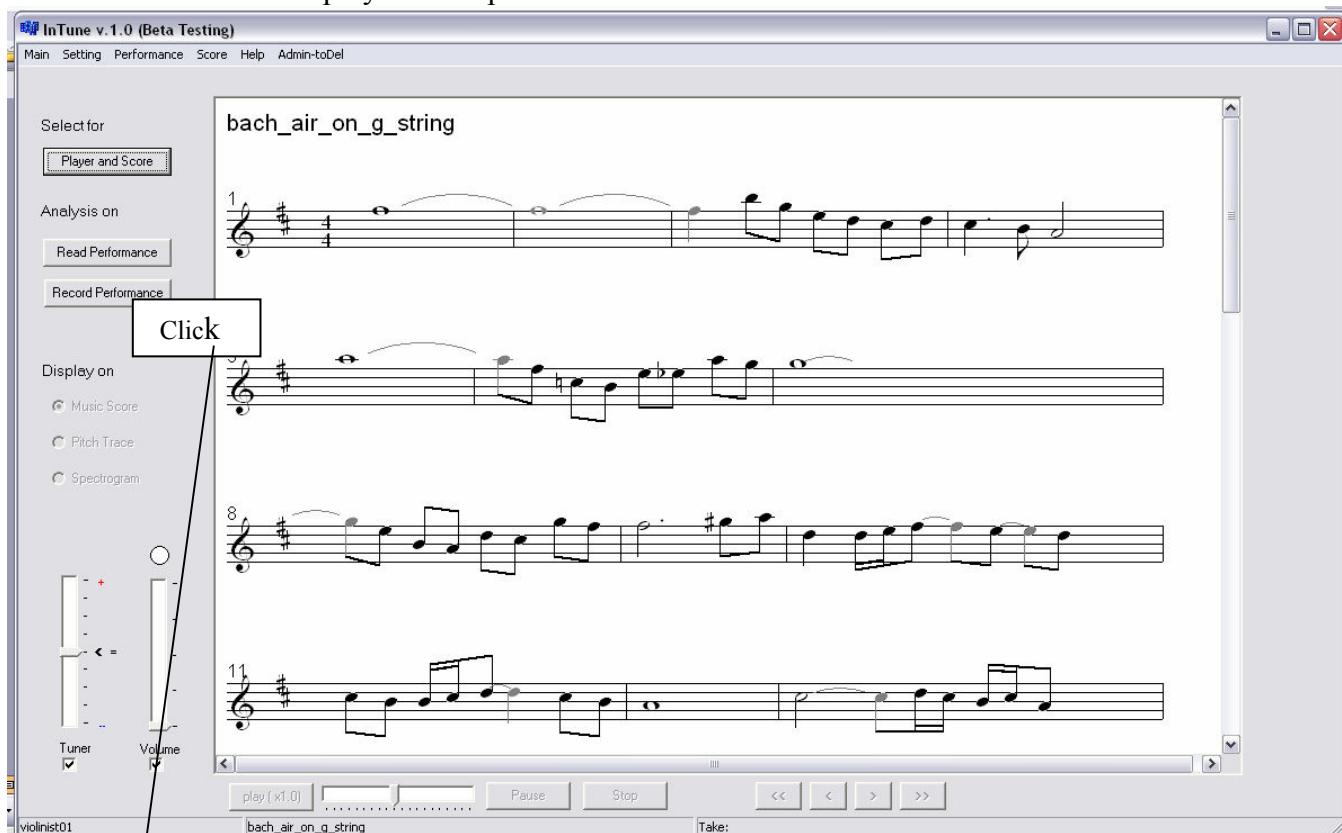


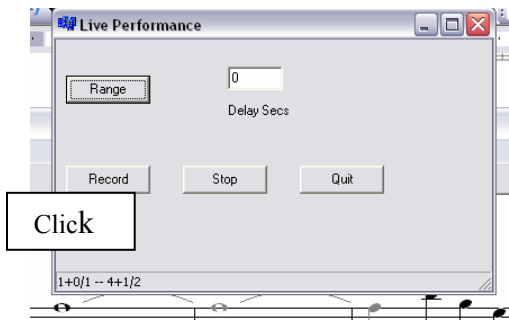
2. Record a performance



Click “Player and Score” button in Initial Window.
Choose a player and a score in the next window.

Initial Window after a player and a piece chosen:



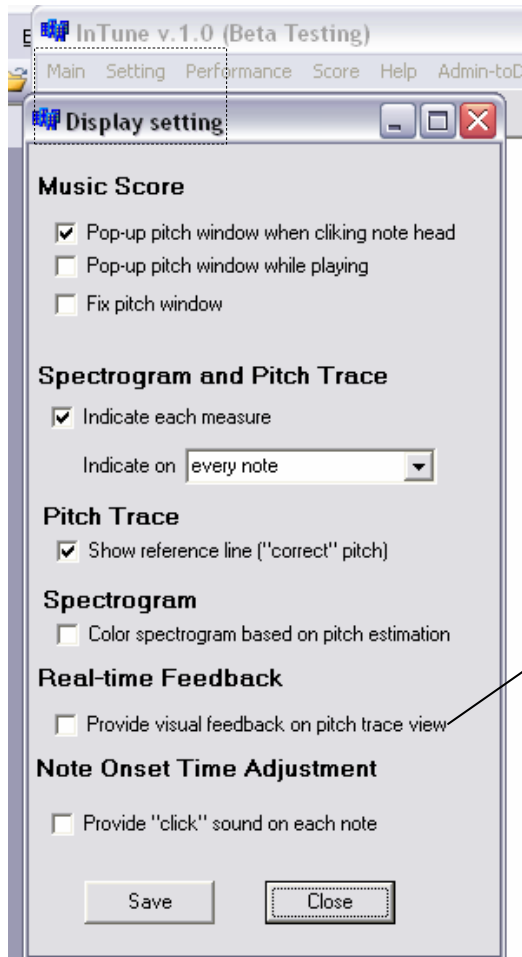


“Record” button is activated. Click it to record the excerpt.

When you complete playing the excerpt, *InTune* automatically finishes recording and calculates tuning analysis. If you want to stop while recording, click “Stop.” You can start the excerpt again by clicking “Record” again. If you want to quit and close Live Performance window, click “Quit.”

* If *InTune* does not stop even after you finish playing the selected excerpt, *InTune* failed following your performance with the score. Please, try again.

* To have real time intonation feedback, go to “Setting” in the main menu and choose “Display”:

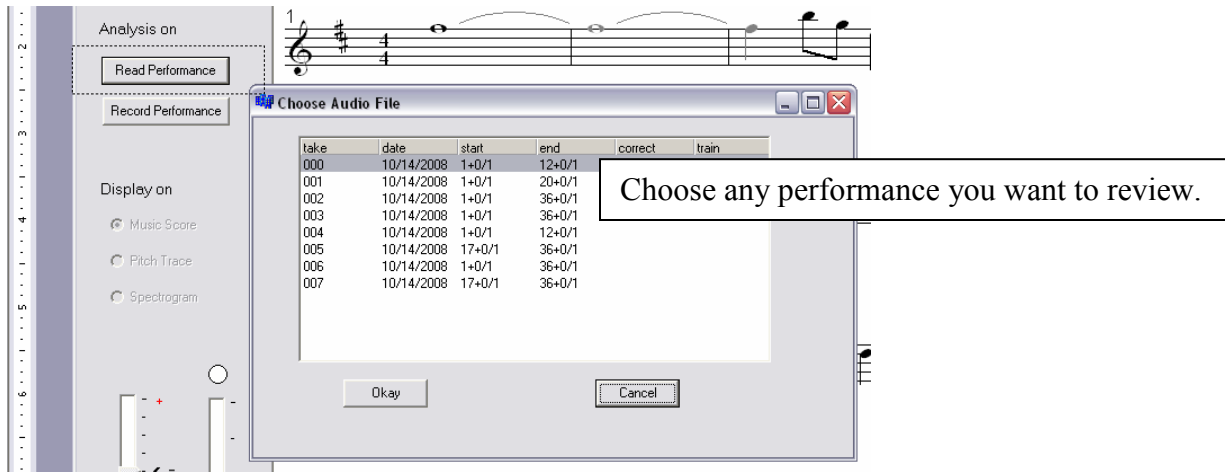


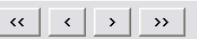
By default, real-time feedback is unchecked. Click the check box and “Save” to get real time feedback.
Check out other options for display setting.

3. Review a recorded performance

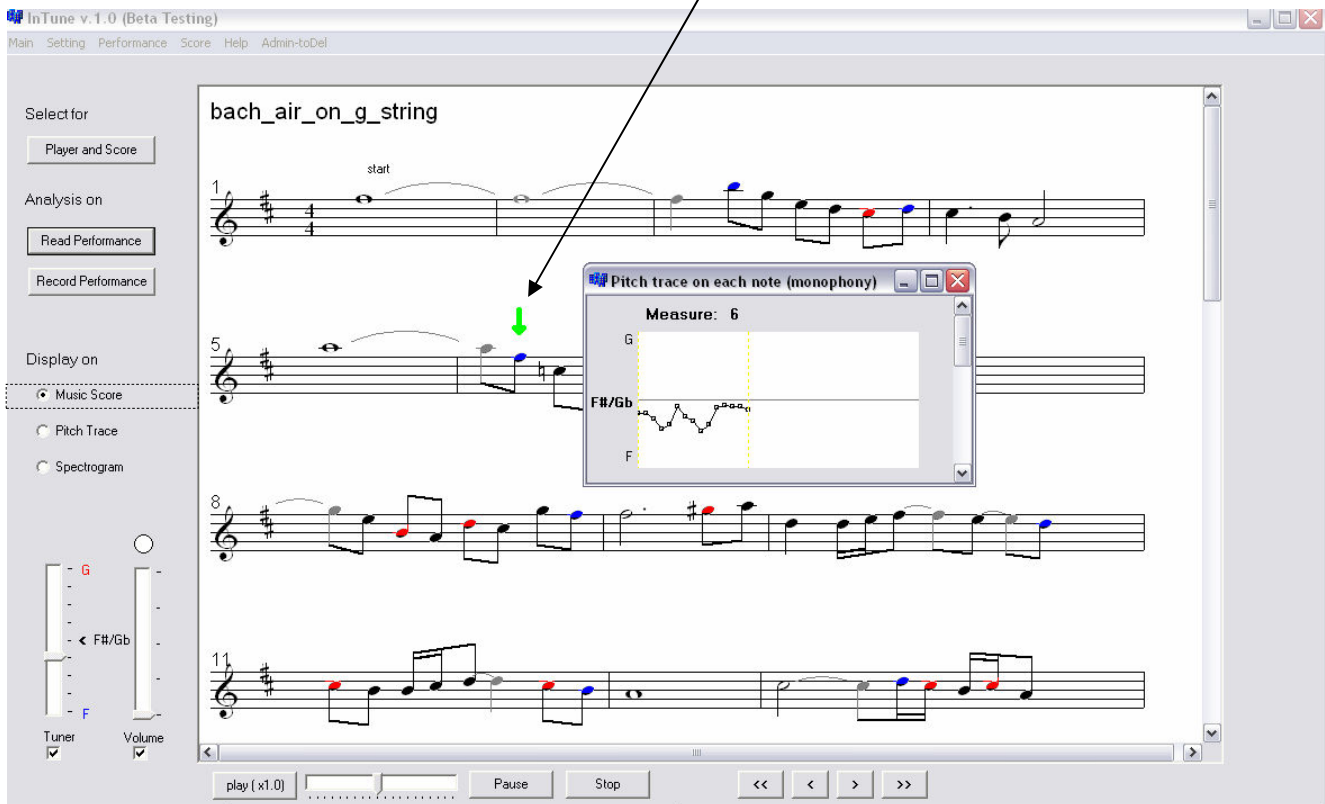
After you are done recording, you can review your performance right away.


If you want to review a previously recorded performance, choose “Player and Score” and click “Read Performance” in Initial Window.



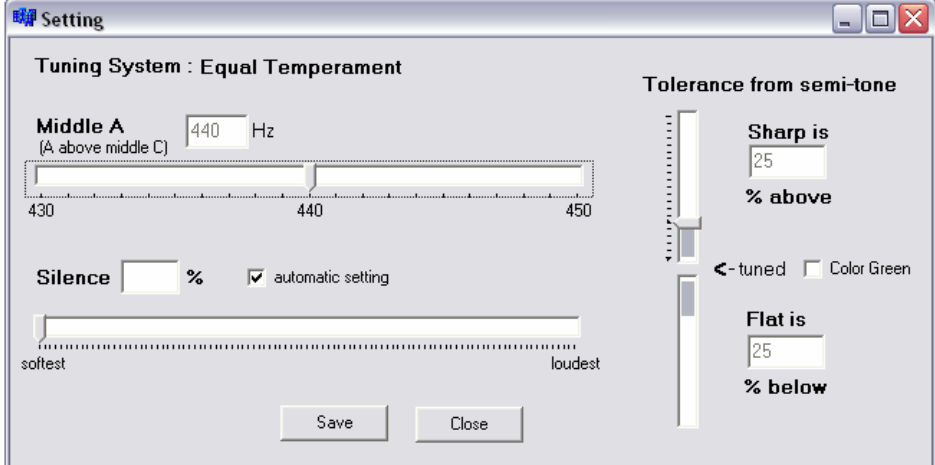
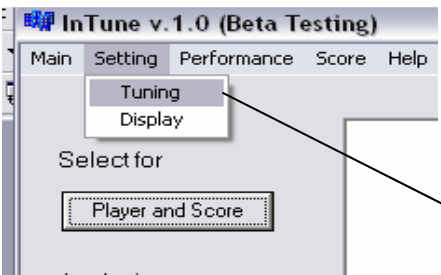
InTune provides three different views for giving feedback. They are all synchronized one another with audio (play your performance with “Play (with flexible playback ratio),” “Pause” and “Stop” buttons. Yellow-green color is associated with the current note which is being played or you have chosen. You can move a current note with the mouse or 4 buttons  located on bottom center in Initial Window.

Three Views: 1. Music Score



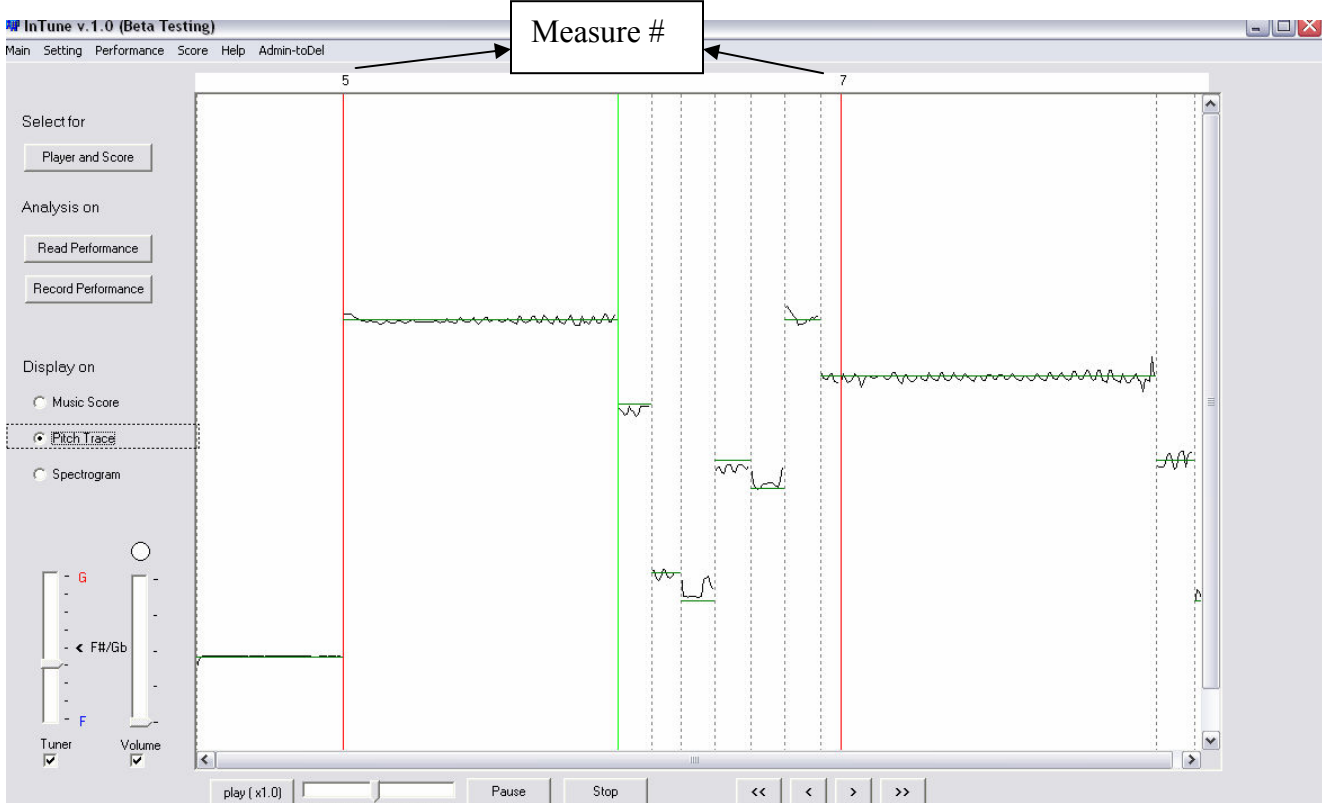
Click a note head on each note when mouse cursor becomes  , then you see a small window displaying a pitch trace for the clicked note.
 Based on your chosen tolerance level from “Tuning” setting, *InTune* colors each note head according to average of pitch estimation.

* To adjust tuning setting:



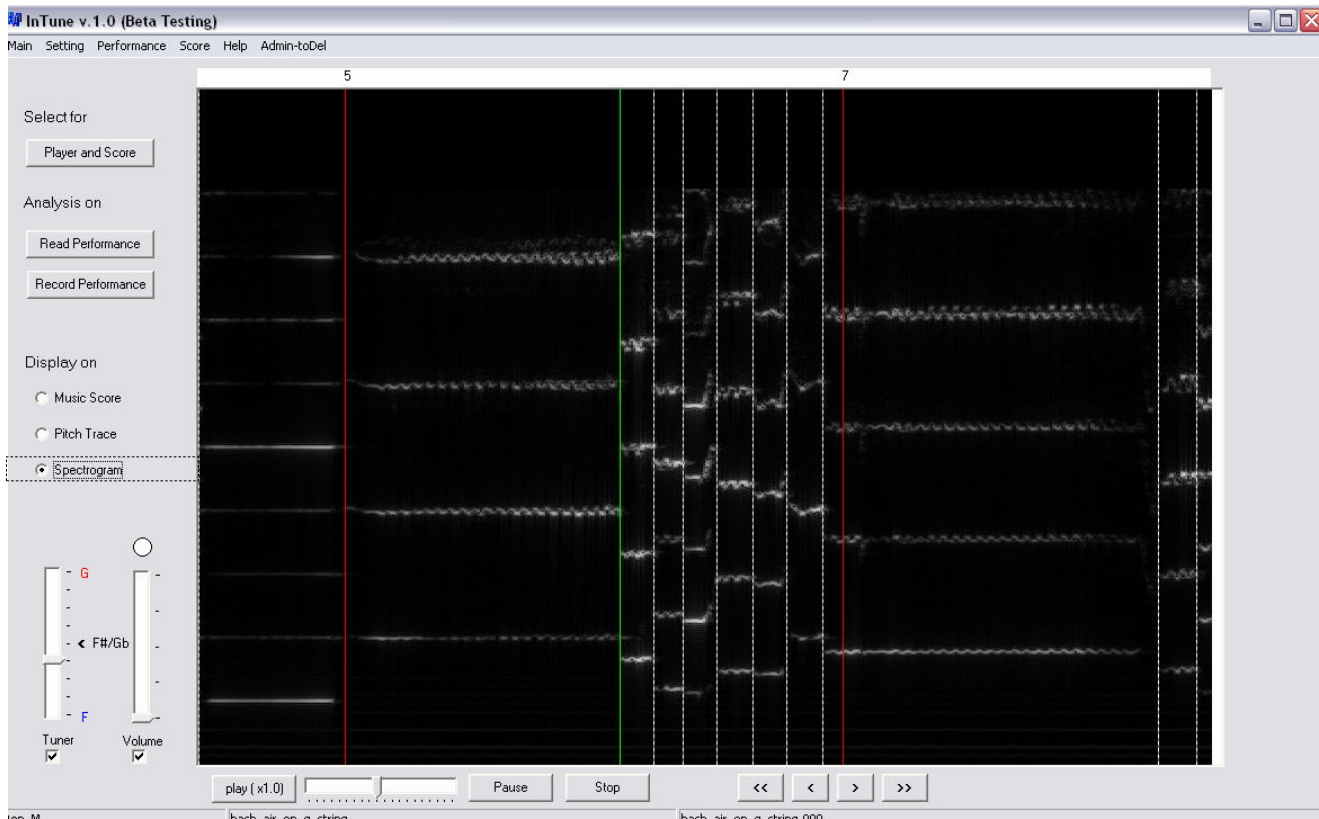
Set tuning and tolerance level of sharp(red)/flat(blue) for feedback.

Three Views: 2. Pitch Trace



The buttons in Initial Window are same functions explained above in Music Score view.
 Also, check out Setting-Display for display options.

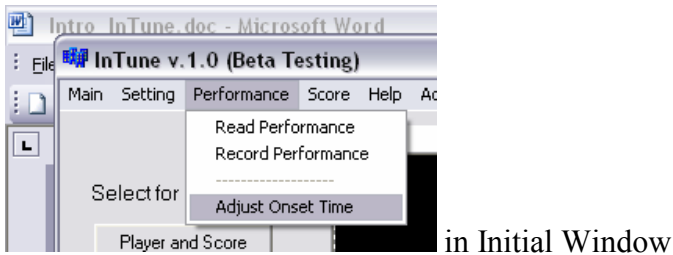
Three Views: 3. Spectrogram



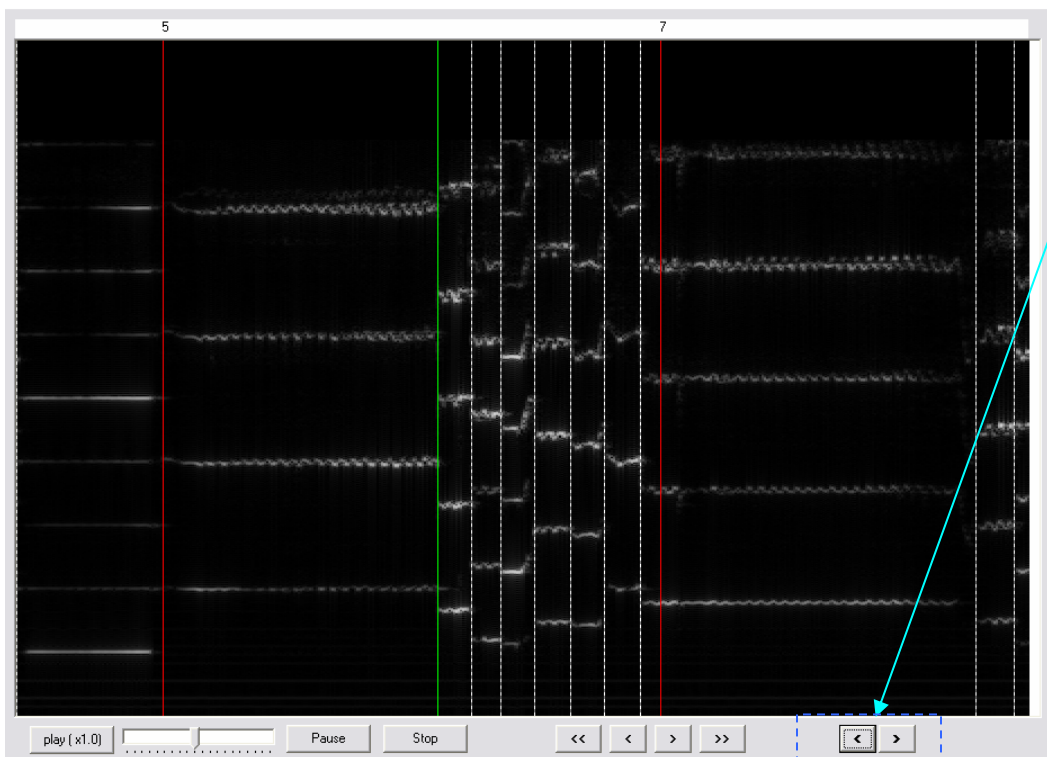
Spectrogram view works in the same way as Pitch Trace view works. You see fundamental frequency and overtones from Spectrogram view. Also, check out Setting-Display for display options. (ex. Color spectrogram based on intonation.)

4. Adjust onset time on each note on the recorded performance

InTune automatically estimates matching between audio of your performance and given music score. However, when you need re-adjust onset time on the audio, you can do it accordingly:



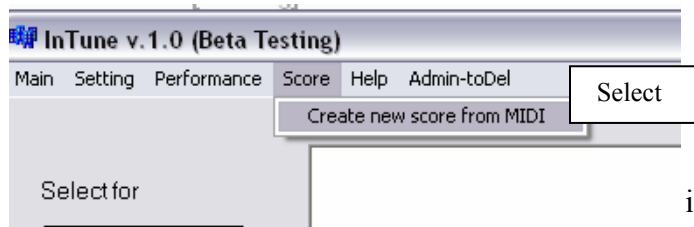
Choose “Adjust Onset Time,” then some buttons are disabled. You see the spectrogram view and two new buttons appear on the right bottom of the screen.



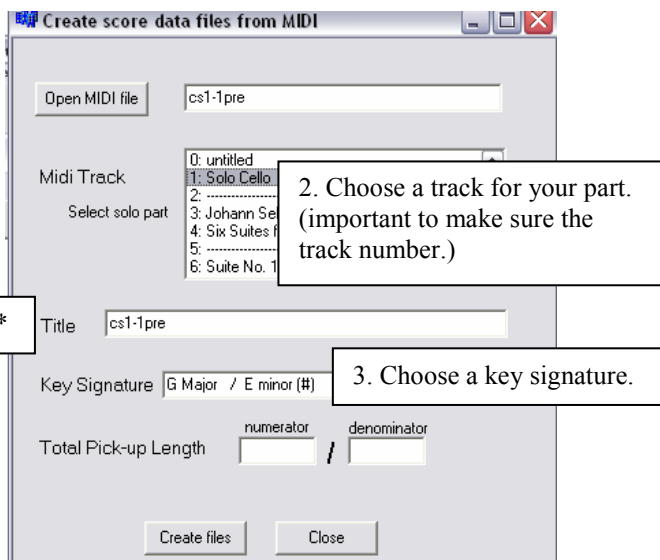
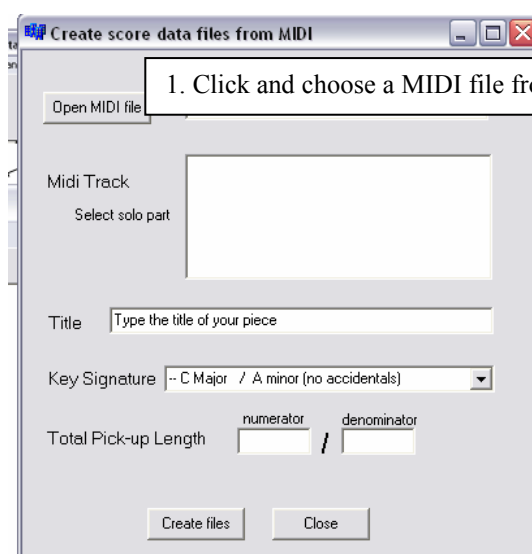
Choose a note you want to change onset time and adjust onset time with the new two buttons.

5. Upload a new score from MIDI file

It is important to have a right MIDI for a single melody piece with a right length, so we encourage you to check the MIDI file from any available notation program or MIDI handling program. Downloaded MIDI files from the Internet cannot guarantee that you would have a reasonable music score.



in Initial Window



* may revise Title. (by default: the file name)

* Total Pick-up Length

When a piece/an excerpt begins with a pick-up, it is necessary for you to give total pick-up length to get a reasonable music score. Some examples are given below to help you.

~~ If you have any questions/comments, email at intune1.0betatesting@gmail.com.