

# Accidental Tuner

Version 1.0 for MuseScore 3.0 and above

Programmed by Gilbert Yammine

[www.gilbertyammine.com](http://www.gilbertyammine.com)

## Plugin Description:

MuseScore allows changing the tuning of each note. However, this should be done manually for each desired note.

This plugin automatically applies tuning to notes in the score altered by accidentals and key signatures. It works with all MuseScore alteration signs.

The plugin is the extension of the Quarter Tone Playback plugin for MuseScore 2.0.

In MuseScore, it is possible to generate custom key signatures in the Master Palette (View → Master Palette). This allows building key signatures for scales that use altering signs different than the normal Sharp and Flat ones.

Moreover, these signs can be used as accidentals by applying them to the notes from the Accidentals Palette.

## Plugin Features:

- **Accidental Auto-Detection:** the plugin automatically detects accidental signs and tunes the respective note automatically.
- **Key Signature Definition:** although it is possible to create custom key signatures in MuseScore, it is unfortunately not possible to access them in the plugin framework. As an alternative solution, the user can set the custom key signature in the plugin itself in order to notify it of the key signature. More details are given later in the How to Use the Plugin section.
- **Custom Tuning:** it is possible to change the tuning of each altering sign and apply that tuning to the notes. The custom tuning can be saved to disk and loaded when the plugin is started.

## How to Install the Plugin:

### Windows:

Extract and copy the whole folder AccidentalTuner to the folder C:\Users\\Documents\MuseScore3\Plugins, where <username> is the name of the Windows user.

### Linux:

Extract and copy the whole folder AccidentalTuner to the folder /home/<username>/Documents/MuseScore3/Plugins, where <username> is the name of the Linux user.

Once the plugin is copied, open Plugins → Plugin Manager in MuseScore. The AccidentalTuner plugin should appear in the plugins list. Click its checkbox and press OK. Now, the AccidentalTuner should appear in the Plugins menu.

**Note:** the plugin was tested on MuseScore 3.0.5.5992 running on Windows 10 and on MuseScore 3.1.0 running on Ubuntu 18.04. No tests were generated on a Mac system.

## How to Use the Plugin:

The figure below depicts the plugin user interface.

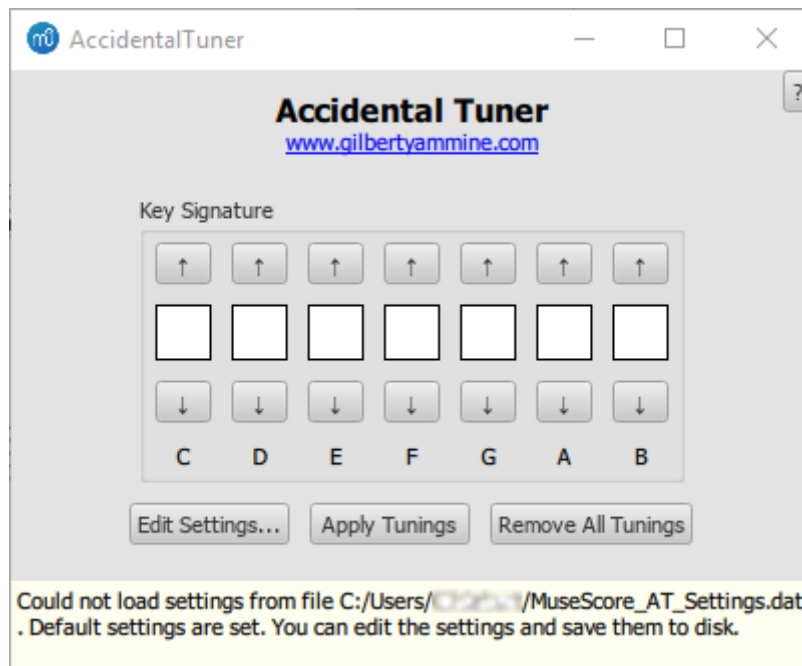


Figure 1: Accidental Tuner Plugin Interface

The Edit Settings button opens a second window, which allows selecting which alteration signs the plugin should consider and changing the tuning for each one.

The Apply Tunings button applies the tuning to the score or to a selection.

The Remove All Tunings button sets the tuning of all notes in the score or in a selection to 0.

The Key Signature part tells the plugin which custom key signature is set. In that way, the tuning is also set to the notes affected by the key signature.

### Edit Settings

When the Edit Settings button is pressed, the window shown in Figure 2 is opened.

The user can scroll over the alteration signs by pressing the < and > buttons. If an alteration sign should be tuned by the plugin, it has to be enabled by checking the Enabled checkbox and its tuning value should be set in the Tuning field.

Once finished, the settings can be saved to disk. In that way, the plugin can load them again every time it is started. To save the settings, press the Save to Disk button. A message appears in the status bar showing the path of the settings file.

The settings are saved in the following paths:

- on Windows: C:\Users\- on Linux: /home/<username>/MuseScore\_AT\_Settings.dat

If the settings are not saved, and as shown in the status bar in Figure 1, when the plugin is started, it loads its default settings (Arabic Tuning > FLAT\_SLASH: -50 cents, FLAT\_SHARP: 50 cents).

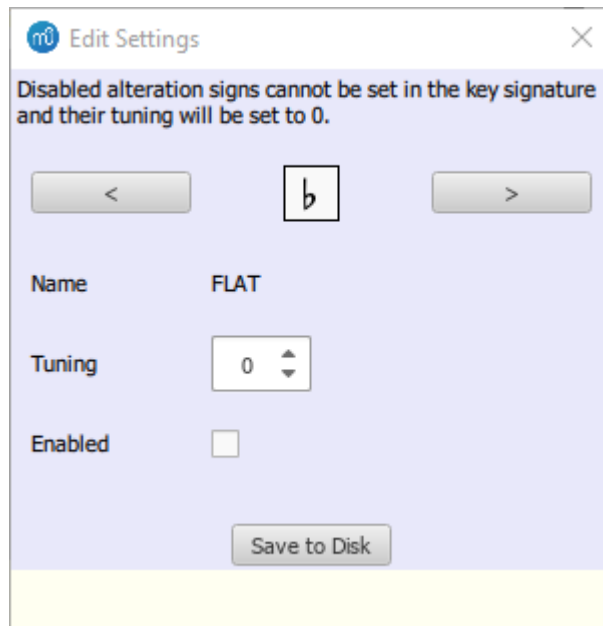



Figure 2: Edit Settings Window

**Note:**

For all alteration signs excluding SHARP and FLAT, the tuning is applied to the natural pitch of the note. A sharp or flat however changes the pitch of the note and the tuning is applied then to the altered note.

Assume the note A4 and the FLAT\_SLASH  sign with -50 tuning value, applying the tuning to it will remove 50 cents from its natural pitch (A4).

Now assume the note A4 again and the flat sign with -50 tuning value, MuseScore will remove 50 cents from the altered pitch (A4 Flat). This is because in MuseScore, the flat sign (and the sharp sign) internally changes the pitch of the note, while the other alteration signs do not.

Apply Tunings

A MuseScore file *AccidentalTuner.mscz* is delivered with the plugin, in which it is possible to follow the following demo.



Figure 3: The Score in *AccidentalTuner.mscz*

The score, as shown in Figure 3, has a main custom key signature (B and E are lowered each by a quarter tone according to the Arabic tonal system). In measure 6, another custom key signature is added (B and F# are lowered each by a quarter tone). In measure 7, the main key signature is applied again. Additionally, the score contains various accidentals with normal flats and sharps, as well as slash flats and sharps.



The first step is to press the Edit Settings button and make sure that the FLAT\_SLASH  and SHARP\_SLASH  alteration signs are enabled and their tuning is set to -50 cents and 50 cents, respectively.

Figure 4 shows how this can be done in the Edit Settings window. Once set, save the settings to disk (this step is not needed if you do not want to have the same settings reloaded on plugin startup) and close the window.

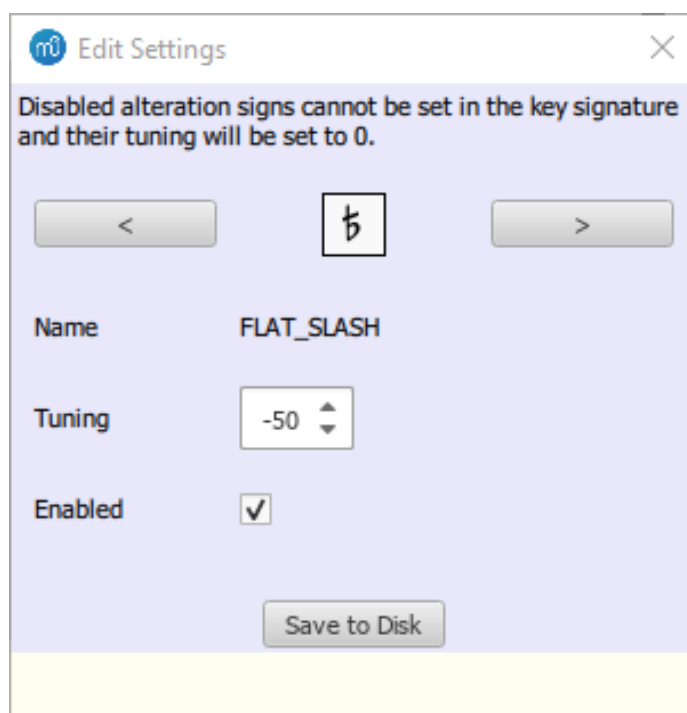



Figure 4: Enabling and Setting the Tuning of an Alteration Sign

In order to apply the quarter tone tuning to the score, the user has to separately select each section containing one key signature and apply the tuning to it.

- Measures 1-5
  - Select the measures
  - Set the key signature in the plugin by selecting for E and B the flat slash alteration sign 
  - Apply the tuning
  - The plugin takes the entered key signature into consideration and applies the tuning to the affected notes. Additionally, it applies the tuning to notes altered with accidentals.
- Measure 6
  - Select the measures
  - Set the key signature in the plugin by selecting a sharp slash sign for F, removing the flat sharp sign from E, and keeping the flat sharp to B.
  - Apply the tuning
- Measures 7-10
  - Select the measures

- Set the key signature in the plugin as for measures 1-5
- Apply the tuning

**Troubleshooting:**

As shown above, the plugin shows an icon for each alteration sign. During the development, different issues were seen where the plugin could not find the images because of path problems.

If the plugin does not show the icons of the signs, press the ? button in the top-right corner and check the location of the images the plugin is trying to search and check that the image files are to be found there.

The window also shows the location of the settings file.