

# The Percussion Pitch Map plugin

*Bob Zawalich updated January 11, 2020*

The Percussion Pitch Map plugin transposes selected notes, optionally changing noteheads and adding articulations according to the chosen pitch map. Specific pitches at specific octaves are transposed, as opposed to all pitches with a given pitch name, which is the case for the *Pitch Mapping* and *Transform Scales* plugins. In addition to its use for percussion mapping, it can also be used strictly for mapping pitches. It is the only available pitch mapper that lets you specify octaves, as well as pitches.

Before importing midi files, assign the Drum Set tracks in the original MIDI file to Channel 10 for best results. Sibelius will map Drum Set notes correctly on import only if they had been assigned to MIDI channel 10. (The original General MIDI spec required drums to be on MIDI Channel 10). This plugin can be useful when the imported Drum Set track was set to a MIDI channel other than channel 10.

This plugin would typically be used in cases where pitch mapping is not done by Sibelius on input.

This plugin will only run in Sibelius 6 or later.

The plugin looks at "pitch maps" which will change a note at a specific pitch name and octave to another pitch name and octave. The new note can also be given a different notehead and articulation.

## Strict and Flexible pitch

Pitch maps are considered to be either *Strict pitch* or *Flexible pitch*. *Strict pitch* maps will match notes exactly as they are spelled in the map, so if you are mapping C<sub>0</sub> to G#<sub>4</sub>, only the note C will match, and only the note G# will be written.

You can use this plugin strictly as a pitch mapper, where you can specify any pitches in any octave, and not be concerned with noteheads or any other percussion issues. It can be run against any Sibelius score. If you do that, you will need to create a new *Strict* map, as described below, and it may be easiest to just create it in a text editor.

*Flexible pitch* maps match and write based on the "MIDI pitch" value only. MIDI pitches are numbers from 0 to 127, and notes that sound the same, such as C, B# and D<sub>bb</sub> all have the same MIDI pitch. A flexible input pitch C<sub>1</sub> will match C, B#, or D<sub>bb</sub>. Similarly, when the note is written, the plugin lets Sibelius decide how to spell it (based on the current key signature), so G# might be written as A<sub>b</sub>.

Pitch maps that start with the special comment line *// Strict pitch* are interpreted as strict pitch maps. Maps that start with the comment line *// Flexible pitch*, or that do not have one of the special comment lines, will be interpreted as flexible pitch maps.

## How pitches are specified

A pitch is specified in a pitch map as a pitch name and an octave number, for example, C<sub>4</sub>. Pitch names are capital letters from A to G with optional b and # characters.

The octave numbers usually run from -1 to 9. In Sibelius, Middle C is considered to be the start of octave 4 (Middle C is thus C4). All the "destination" pitch octaves are specified as if C4 were Middle C.

However, different programs that provide input MIDI files might treat Middle C as being a different octave, such as C3 or C2. Each map file specifies how the octave for the input pitches should be interpreted, and if C3 is chosen, then the input octave range will be -2 to 8.

What this means in practice is that you might be reading a percussion map from Logic, and it tells you that C1 is a bass drum. In Logic, Middle C (MIDI pitch 60) is C3 (rather than C4 as Sibelius uses). If C3 is 60, C2 is 48, and C1 is 36, and a MIDI file from Logic gives Sibelius a note with the value MIDI 36, which Logic considers to be C1. But Sibelius will interpret and display MIDI 36 as C2.

Many DAWs and sample libraries (and most of the shipping maps) assume C3. The plugin allows you to use the source octave values from your DAW (Logic, Digital Performer, etc.) rather than requiring you to always enter values based on Sibelius' interpretation. The plugin pitch maps include a field in the first line comment that tells the plugin how to interpret the source octave. The value specified is the value of Middle C (MIDI 60) in the source program.

When the program runs, and the map says to look at C1, the plugin checks to see the value of Middle C. If it is C4, it interprets MIDI 24 as C1. If Middle C is C3, the plugin will instead look in the score and try to match MIDI 36 as C1. If the comment specified C2, then C1 would be interpreted as MIDI 48. And so on.

This is probably the hardest concept in the plugin to digest. If you are only using the shipping maps, don't worry about it. But if you are editing or creating new maps, be very careful that you are specifying the octave correctly.

If you specify C4 as Middle C, then both the source and destination octaves will mean the same pitch, which could be simpler to keep track of. If you are using the plugin only to map pitches, you should have an initial comment

```
// Strict pitch, C4
```

If there is no initial comment, the plugin assumes the equivalent of

```
// Flexible pitch, C3
```

## **Data files for transposing**

The data that determines the pitches of notes to be transposed is stored in text files. These are by default in a subfolder called "Percussion Pitch Map" of the folder containing the plugin PercussionPitchMap.plg.

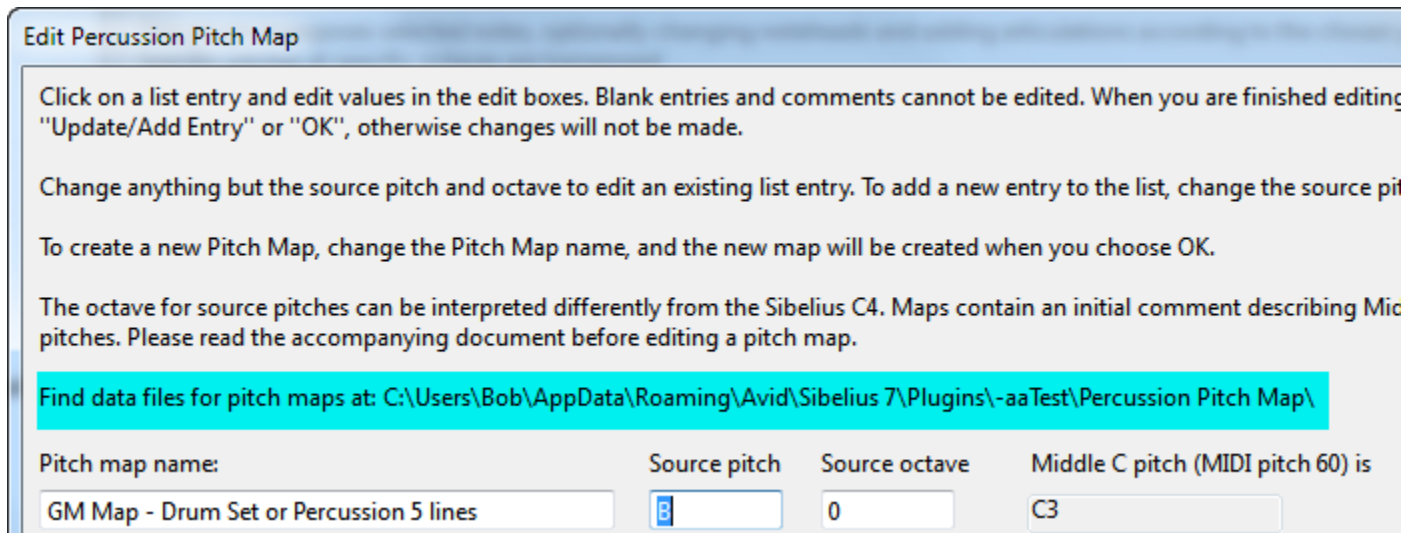
So, for example, if the plugin is stored in

C:\Users\Bob\AppData\Roaming\Avid\Sibelius 7\Plugins\-aaTest\,

the text files will be in

C:\Users\Bob\AppData\Roaming\Avid\Sibelius 7\Plugins\-aaTest\ Percussion Pitch Map\.

You can find the folder name that holds your data files by editing a pitch map; *the data file folder name appears in the text block at the top of the edit dialog.*



If the data file folder does not exist or is empty, the plugin will ask you to choose an existing folder that contains data files (you might have one already for a different Sibelius version and want to share files). If there is no existing folder, it will create a folder and create a series of pitch map data files that ship with the plugin (thanks to Robert Puff for providing the pitch maps and for the concept for the plugin).

If you create new pitch maps that you want to share with other users, you should send them copies of the appropriate data files in the data file folder, and have them copy them to the data file folder on their machines.

## Sharing data files between different Sibelius versions

If you have both Sibelius 6 and 7 on the same machine and want to share the data files, run the plugin in one version to set up the data file folder. Then when you run the plugin in the other Sibelius version, it will ask you where you want to get your data files. This time browse to the folder you used for the other version.

If you have already run both versions of the plugins and set up separate data file folders, you can delete (or maybe better, rename) one of the data folders, run the plugin again, and tell it to use the other data folder.

If you have data files you have created, you can give them to another user. Just have that person copy them to the appropriate data file folder.

## Data File Details

The following explanation can safely be ignored if you are not planning to create pitch map text files yourself with a text editor. If you edit with the dialog's editor or just use the shipped files you do not really need to understand the structure of these data files.

These files contains values for transposing, and might look like this:

```
// Flexible pitch, C3
//BASS DRUMS
B,0,E,4,0-Normal,,Bass Drum 2
C,1,F,4,0-Normal,, Bass Drum 1
//SNARE DRUMS
C#,1,C,5,1-Cross,, Cross Stick
D,1,C,5,0-Normal,, Snare Drum 1
E,1,C,5,0-Normal,, Snare Drum 2
Bb,0,C,5,12-BackSlashed,,Rim Shot (not in GM Spec)
//TOM-TOMS
F,1,G,4,0-Normal,, Low Floor Tom
G,1,A,4,0-Normal,, High Floor Tom
A,1,B,4,0-Normal,, Low Rack Tom
B,1,D,5,0-Normal,, Low-Mid Rack Tom
C,2,E,5,0-Normal,, High-Mid Rack Tom
D,2,F,5,0-Normal,, High Rack Tom
//HI-HAT
F#,1,G,5,1-Cross,, Closed Hi-Hat
G#,1,D,4,1-Cross,, Pedal Hi-Hat
A#,1,G,5,1-Cross,7-Harmonic/Open, Open Hi-Hat
//CYMBALS
D#,2,F,5,1-Cross,,Ride Cymbal 1
B,2,F,5,1-Cross,,Ride Cymbal 2
C#,2,A,5,1-Cross,, Crash Cymbal 1
G,2,B,5,1-Cross,, Splash Cymbal
A,2,E,6,1-Cross,, Crash Cymbal 2
E,2,C,6,1-Cross,, Chinese Cymbal
F,2,F,5,2-Diamond,, Ride Bell
//WOOD BLOCK
F,4,C,5,16-Shaped Note1,,Low Wood Block
E,4,D,5,16-Shaped Note1,,High Wood Block
//TRIANGLE
A,4,A,5,16-Shaped Note1,,Triangle Open Stroke
G#,4,A,5,16-Shaped Note1,8-Plus/Closed,Triangle Muted
//TAMBOURINE & COWBELL
```

F#,2,B,4,14-ArrowUp,,Tambourine  
G#,2,E,5,16-Shaped Note1,,Cowbell

The data file can have an arbitrary number of lines. Blank lines are allowed (and ignored), and lines that start with two forward slashes (//) are treated as comments. With the exception of the special comments at the start of the map file, comments are ignored. If you would like to incorporate additional comments, such as the instrument types in the example above, open the .TXT file in a text editor and add these manually. Each line can also have a comment as the last field in the line.

If the first line of a pitch map file is the special comment of the form  
// <pitched type>, <Middle C octave>

the map is interpreted as a *strict* or *flexible* map with a specific source octave for Middle C.

<pitched type> can be either *Flexible pitch* or *Strict pitch*  
<Middle C octave> is a capital C followed by a number (no spaces) usually in the range of -2 to 9.

If the first line is not one of these comments, the map is interpreted as a *Flexible pitch* map with source octave C3.

Data lines contain the pitches and other data to be mapped, and these are of the form

<source pitch name>, <source octave>, <destination pitch name>, <destination octave>[,<notehead>[,<articulation>[,<comment>]]]

*pitch names* are the letters A – G with optional b and #  
*octave* is a number, usually in the range of -1 to 9 , though the source octave may be in a different range.

The first 4 fields are required; the others are optional.

*notehead* is one of these entries:

- 0-Normal
- 1-Cross
- 2-Diamond
- 3-Beat Without Stem
- 4-Beat
- 5-Cross Or Diamond
- 6-Black And White Diamond
- 7-Headless
- 8-Stemless
- 9-Silent
- 10-Cue
- 11-Slashed
- 12-BackSlashed

13-ArrowDown  
14-ArrowUp  
15-Inverted Triangle  
16-Shaped Note1  
17-Shaped Note2  
18-Shaped Note3  
19-Shaped Note4 Stem Up  
20-Shaped Note5  
21-Shaped Note6  
22-Shaped Note7  
23-Shaped Note4 Stem Down

exactly as spelled. If you are entering information directly in a text editor, you can alternatively just use the number.

For *articulations*, use one of these entries

0-Custom1  
1-Staccato  
2-Staccatissimo  
3-Wedge  
4-Tenuto  
5-Accent  
6-Marcato  
7-Harmonic/Open  
8-Plus/Closed  
9-Upbow  
10-Downbow  
11-Custom2  
12-Long fermata (square)  
13-Fermata (Pause)  
14-Short fermata (triangle)  
15-Custom3  
16-2 tremolos  
17-4 tremolos  
18-8 tremolos  
19-16 tremolos  
20-32 tremolos  
21-Buzz roll (Z on stem)

exactly as spelled. If you are entering information directly in a text editor, you can alternatively just use the number.

If you do not want either noteheads or articulations, just put in the first 4 entries. If you want notehead only, enter the notehead with no following comma.

For articulation without notehead, use 2 commas where the notehead would go,

such as

C,-1,C,4,0-Normal,7-Harmonic/Open

F#,1,G,5,1-Cross,8-Plus/Closed

G,1,G,5,1-Cross,7-Harmonic/Open

C,1,C,4

F#,2,G,5,1-Cross

G,3,G,5,,7-Harmonic/Open

C,3,C,4,0,7

F#,3,G,5,1

G,4,G,5,,7

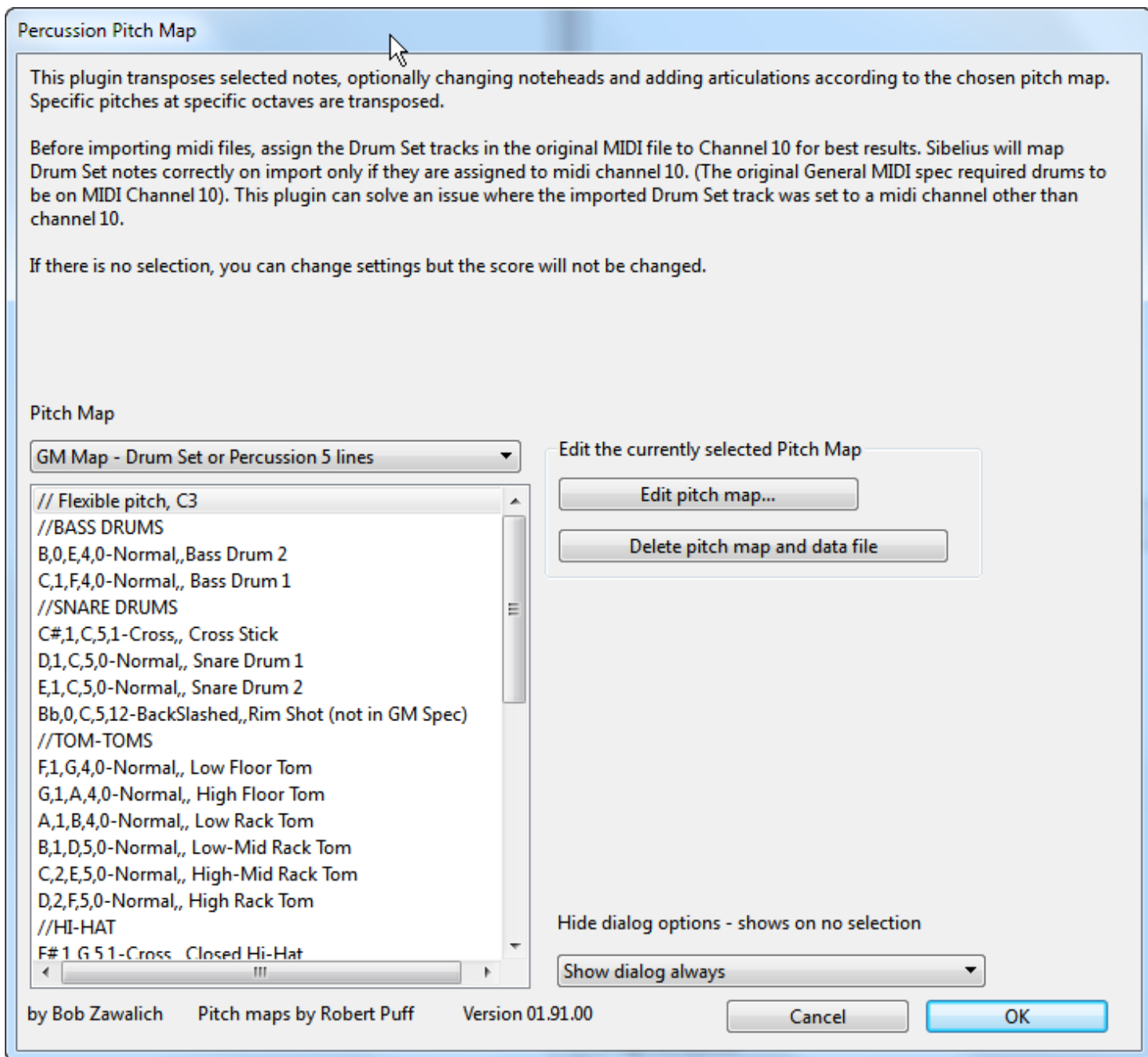
Note that the pitch name and octave are separate fields.

Do not duplicate the source pitch/octave in a single file. You *can* duplicate the destination.

## Using the Plugin

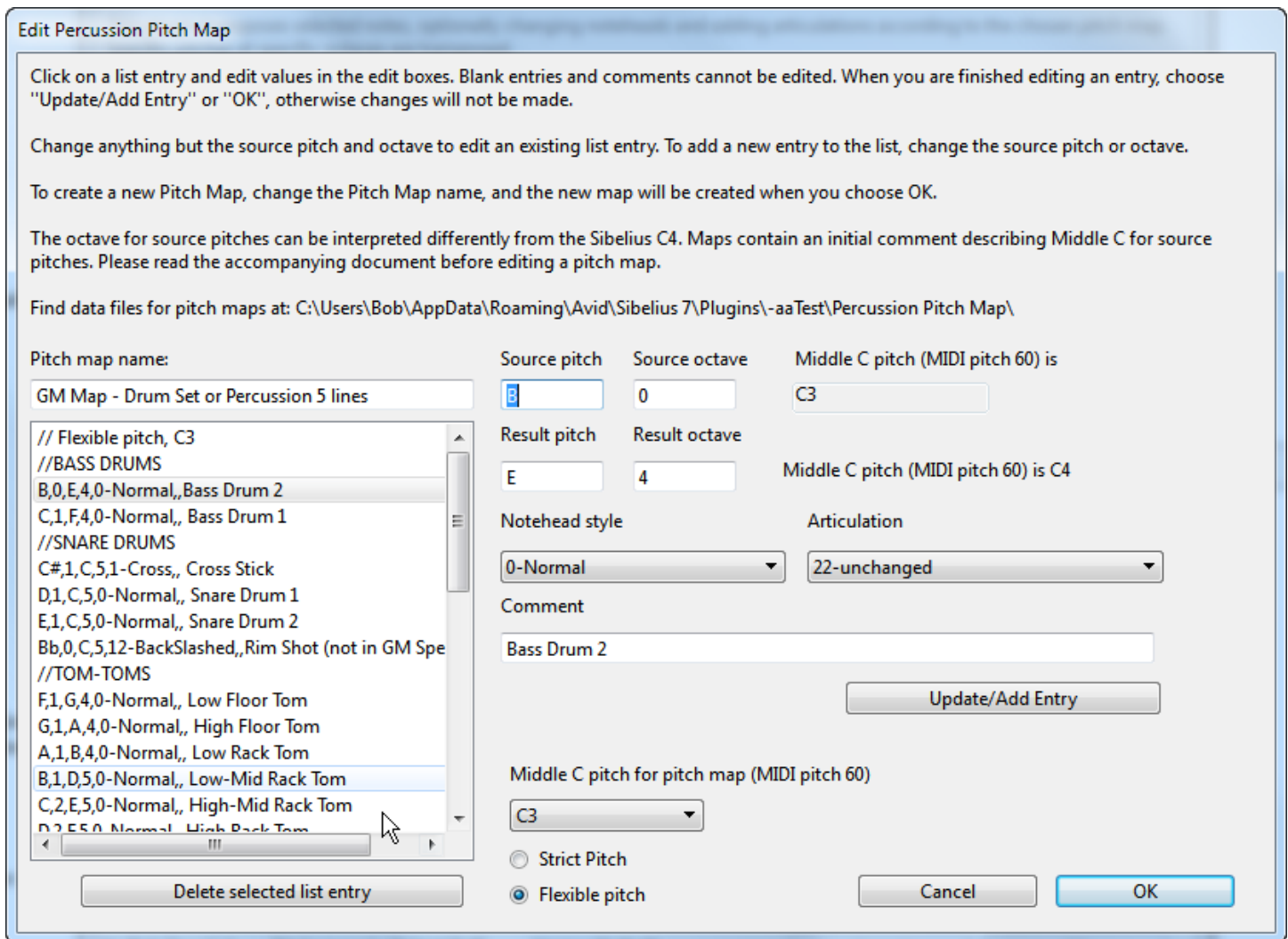
Typically, a dialog will come up when the plugin runs, though you can prevent that. The dialog has a list showing the contents of the current position data file, and a list of the available data files. If you select a new data file name, the contents of the main list box will be updated.

Here is an example of the main dialog.



You can delete a pitch map and its associated data file (be sure you really want to do that!) in this dialog. You can edit entries in the currently selected data file and create new lists/data files by using the Edit pitch map... button, which brings up the editing dialog:





In this dialog, you edit the pitch map selected in the main dialog. Select an entry in the large list box, and its contents will be placed in the row of edit boxes and combo boxes. Change any fields, and choose Update/Add Entry to replace an existing entry, if the source pitch and octave are unchanged, or add a new entry at the end of the list, if the source pitch and octave were not previously in the list box.

You can also change whether the map is interpreted as *Strict* or *Flexible* pitch, and can also specify how the source octave is to be interpreted by specifying *Middle C for pitch map*. Note that these two settings affect all the entries in the pitch map file.

If the edit boxes are changed and you hit OK, any changes made will be reflected in the list. If fields are changed and you then change the selection in the list box without updating first, the changes will not be saved.

To create a new pitch map and corresponding text file, type a new pitch map name in the edit box in the dialog's lower left. When you choose OK, the new pitch map will be created.

## How to use the plugin

To use the plugin, you just need to make a selection, choose a pitch map and run the plugin.

Be careful of the following:

1. Understand the difference between a *strict pitch* and a *flexible pitched* pitch map. A *strict pitch* map will match the spelling of the notes it finds and changes to. A *flexible pitched* map only matches the MIDI pitch value, which can be spelled different ways (C/B#/Dbb are all the same MIDI pitch number). Strict pitched maps will always start with a `// Strict pitch` comment.
2. Know the input octave for Middle C in the score you start from. Make sure the pitch map is set up to use the same input octave. If you are using this plugin as a pitch mapper only, your map should start with `// Strict pitch, C4`.
3. Some pitch maps will include octaves lower than -1, and these cannot be run if the Middle C octave is C4. (If -2 is the low octave, C3 is the highest valid Middle C value. If -3 is the low octave, C2 is the highest valid Middle C). Note also that the normal octave range is -1 to 9, so if -2 is the lowest, 8 should be the highest, and so forth (top octave minus bottom octave should always be 10).

There is weird stuff here. With luck you will only need to use the built-in data files and most of the issues will not come up.