

5-string banjo TAB in Sibelius – dealing (mostly) with fretted notes on the 5th (short) string

Bob Zawalich November 19, 2011

Sibelius is an easy-to-use and very powerful and flexible piece of software, capable of generating truly publication quality scores, and capable of realistic playback.

5-string banjo Tablature is available in Sibelius, but Sibelius is not especially well suited to tablatures that do not follow the half-step-per-fret, strings-in-ascending-pitch model that guitar tablature uses.

It may be worth investigating other software that is set up to handle different tablature models (such as MusEdit or TablEdit) that will probably be easier to use with banjos than Sibelius will be, especially if you use a lot of fretted 5th string notes.

Assuming that you are interested in using Sibelius for 5-string banjo (hereafter just referred to as *banjo*), music, here are some problems and some solutions.

Sibelius and Banjo tablature

Sibelius treats TAB for a 5-string banjo like any other TAB. It assumes that each fret number is a half-step about the previous one, and to some extent, also assumes that the bottom string in the staff has the lowest pitch.

Both assumptions are incorrect for 5-string banjo TAB.

For a banjo, the bottom tab string is the short 5th string, which typically starts at the 5th fret for the rest of the strings, and has the highest starting pitch of the strings.

If there are fretted notes on that string, they *should* be numbered starting from 6. So assuming the open string (fret 0) is G, then fret 6 will be G#/Ab, fret 7 will be A, etc. You will never see frets 1 – 5 marked.

In much tabbed banjo music, you never see fretted notes on the 5th string; it will only be played open (fret 0).

Sibelius will think that fret 1 is G#, and fret 6 is C#, and this will cause problems both for playback of TAB staves and for copying to and from notation staves.

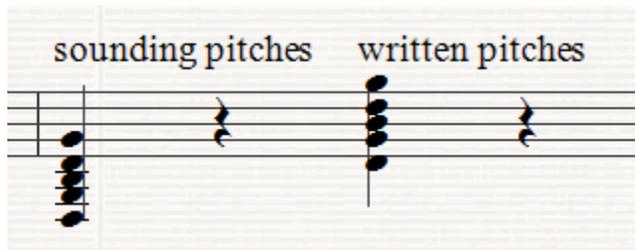
(There is also a long-necked banjo where the 5th string starts at the 8th fret, but I am not going to deal with that here).

Banjo music in notation (not tablature) staves

There are many possible banjo tunings, but for simplicity I will assume the standard bluegrass Open G tuning, which looks like this:



These notes (all 5 open strings) on a standard staff are shown below. However, like guitar, pitches on a banjo notation staff are written an octave higher than they sound. Note that the D3 is the lowest note, and the 5th string G4 is actually the highest note in the standard notation .



In Sibelius 7, the banjo notation instrument is set up as an octave transposing instrument, so you don't have to change the instrument definition.

Unfortunately, Sibelius 6 does not set up its banjo (notation) instrument to work this way, so if you will be copying from banjo TAB to a notation staff, you would have to transpose all the copied music up by an octave. Alternatively, you can edit the banjo (notation) instrument so that it transposes by an octave, like a guitar does, and so you will not have to transpose when you copy. Edit the instrument in Edit > Instrument. In the Transposition block, make middle C sound as C3, rather than C4, in both the non-transposing and transposing score.

You should also set up chord symbols in that dialog so they match the tuning of the TAB staff with which the notation staff is associated. This is true for both Sibelius 6 and 7.

If I were going to do a lot of banjo TAB, I would create new banjo instruments for each tuning I would use, and, in Sibelius 6 and earlier, set up the transposition and chord symbol mapping. So I might have the instruments Banjo (notation gDGBD), and Banjo (notation aEADE), etc. I would define these, and export them into a House Style, which I would then import into a score, even into a Manuscript Paper. This way the notation and TAB staves would be in sync.

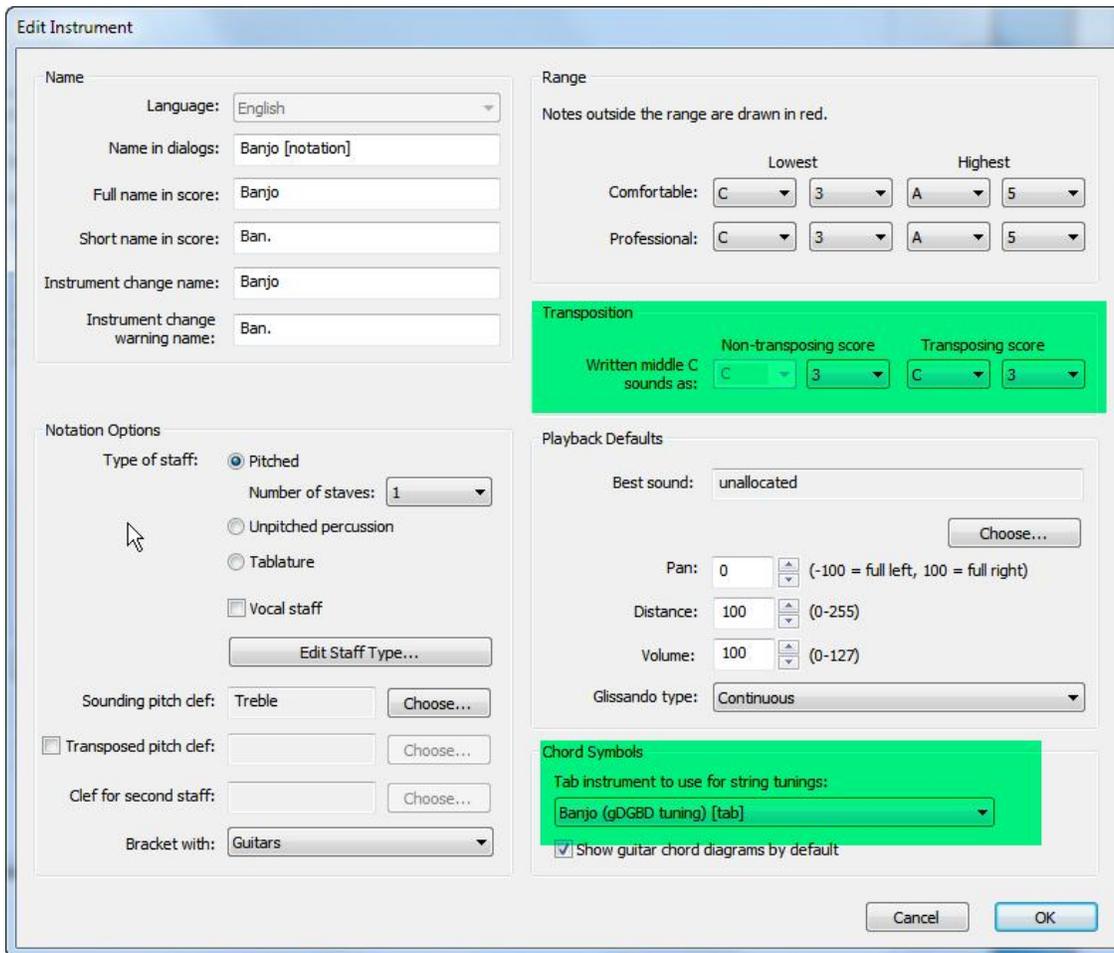
I have created a set of Manuscript Papers each with a notation and TAB staff, for each of the standard tunings. The notation staves are transposed up an octave the associated TAB staff is set in the notation staff, and each score contains a notation staff, and a TAB staff that shows its tuning:

Here is a list of the tunings available:

- Banjo+Tab aDADE.sib
- Banjo+Tab aEAE.sib
- Banjo+Tab gCGBD.sib
- Banjo+Tab gCGCD.sib
- Banjo+Tab gDF#AD.sib
- Banjo+Tab gDGBD.sib
- Banjo+Tab gDGCD.sib

The image shows a musical manuscript for a banjo. It consists of two systems of music. Each system has a treble clef staff and a four-line tablature staff. The first system is numbered 1 through 6, and the second system is numbered 11 through 16. The tablature staff has strings labeled E, D, A, A from top to bottom. The music is written as a sequence of notes on the treble staff and corresponding fret numbers on the tablature staff.

An example of banjo Manuscript Paper



Setting up a banjo notation staff to be octave transposing in Sibelius 6

Copying Music to and from banjo TAB and notation staves

Once the notation staff has the proper transposition and chord symbol association, if the only notes tabbed on the 5th string are at fret 0, you can safely copy banjo TAB to Sibelius notation staves, and the notes will be correct, and playback will work in both the TAB and notation staves.

Copying from a notation staff to a TAB staff is problematic, though. You may find that notes will be copied onto fretted positions of the 5th string. If this happens, you will probably have to adjust these notes.

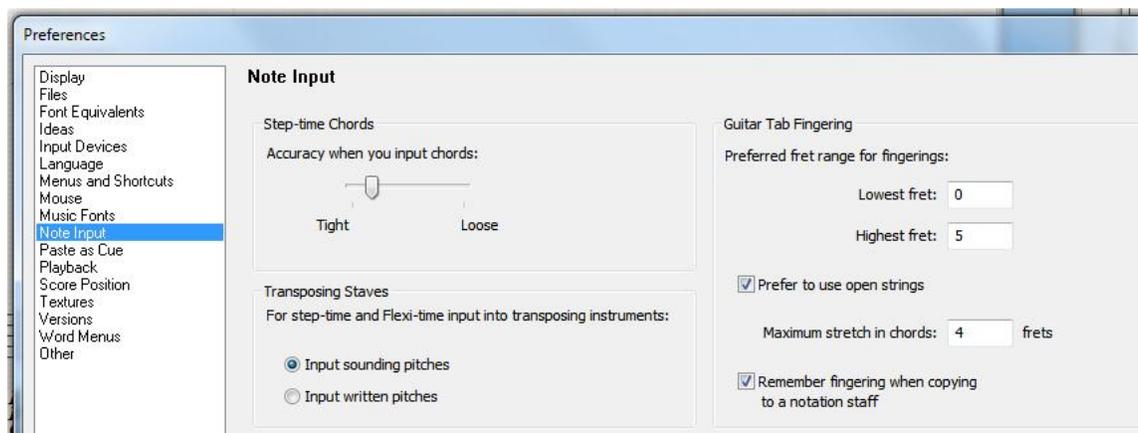
If you are assuming that a tabbed 6 on the 5th string is really a half-step about the open string (Ab, not C#), then after copying, you will have to adjust the TAB numbers that went to the 5th string. You should never see frets 1 – 5 listed for that string.

You can either drag such notes to the 1st string (D4), or add 5 to all the numbers if you want them to stay on the 5th string.

If you add 5 to the numbers, then if you copy the TAB back to a notation staff, the pitch will not be what you expect. Also, playback of the TAB staff will not be what you expect.

If the notes originated in a TAB staff, and had then been copied to the notation staff, the notes will retain their "string number", which tells it which string to go on. So a copy back to a TAB staff will typically (though not always) put the notes on the same string they started on. If the Preferences Note Input option "Remember fingering when copying to a notation staff" is off, the notation staff will not remember what fingering was used, and it is sometimes not reliable, so I usually expect to have to make some adjustments after a paste.

If the notes did not come from a TAB staff, the string number for the notes is undefined, and Sibelius will use the options in Preferences > Note Input for Guitar Tab fingering to determine which strings notes will go on. This will usually work pretty well except when notes go to the 5th string.



In open G tuning, Sibelius sees the first string at D4, and then the 5th string at G4. So it is likely that anything from G4 up will go to the 5th string, and Sibelius thinks that the first fret is Ab, and the 6th fret is C#.

So dealing with these issues is the point of the rest of this document. I hope to explain some techniques that will help to write banjo TAB that looks right, sounds right in playback, and copies correctly to and from notation staves.

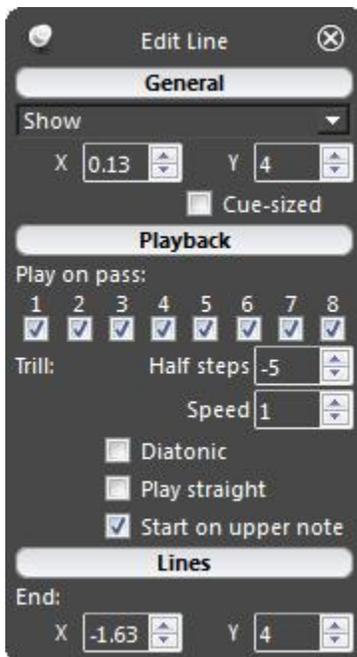
Unfortunately, there are no options that will make everything just work. But I am hopeful that it will be better than what we have now.

Option 1: Living only in Banjo TAB

If your music is entered in banjo TAB and is never copied to a notation staff, you only have a single problem, which is that playback of fretted notes on the 5th string are 5 frets higher than you want them to be. And if there are no fretted 5th string notes, you should not need to do anything special at all.

The simplest, and probably most elegant fix for playback of fretted 5th string notes I have found comes from Steve Horn, who adds hidden trill lines to each fretted note on the 5th string. Once you create the trill, set its properties in the Property Window or Inspector so it trills -5 half steps, with a speed of 1 (the closest you can get to 0 and still save the trill), and Start on upper note.

Create one trill, and then copy it wherever you need one. Hide them once they are in place.



One of the advantages of this scheme is that since it effectively transposes the notes it is attached to down 5 frets, it will adapt if you change the pitch of the note.

Steve Horn points out that there are quirks with this mechanism, including the fact that when you click on the note on the staff while editing, it plays the base note, i.e., the wrong pitch.

As an alternative playback mechanism, you can run the *Banjo Play Fretted 5th String* plugin. It will look at any selected single notes on the 5th string that are above fret 5, and change the notehead to be silent while adding another note on the same string 5 frets lower. This works well if you are only using TAB, but there are limitations that are discussed in the description of plugins below.

There are other ways to get playback to work (using MIDI messages, manually putting 2 notes in the same location, silencing one and hiding the other), but none are as simple or as adaptable as this. Do be sure to set the speed of the trill to 1, though, or you may find the notes playing back in a very warbly fashion.

Option 2: When you need to copy TAB to and from notation staves

1. A simple world: copying from a notation staff when you want no fretted notes on the 5th string.

If notes are copied from a notation staff to a banjo TAB staff, fretted notes may appear in the 5th string. The fix is to move the any notes above fret 0 from the 5th string to the 1st string (the highest normal string). This is fine unless there is already a note on the 1st string at that position, in which case you would have to move one of the notes to another string, which itself may be occupied.

The plugin *Fix TAB 5-String Banjo* will move fretted notes from the 5th to the 1st string, and then try to resolve collisions with notes already on the string. You can run the plugin after doing a copy, and after doing so, in most cases, the TAB will be fine, and will playback correctly, and will copy correctly to a notation staff.

2. copying to a notation staff from a TAB staff when there are no fretted notes on the 5th string.

This is simple. The pitches should be correct, and they should copy to the notation staff with no problems.

3. Complications set in. Fretted notes on the 5th string.

I will assume that you have a good reason to want to do this (such as transcribing something that is played with fretted 5th string notes), because all the fixes for this scenario involve compromises, and you will have to keep track of what you have done if you ever make changes to the notation. And of course you will inevitably make changes.

Here are some of the issues involved if you use fretted 5th string notes, where tab number 6 refers to one half-step above the open string, and there are no frets 1 – 5.

1. Playback of the TAB staff will be wrong
2. Copying from TAB to notation staves will produce incorrect notes
3. Copying from notation to TAB staves will produce incorrect notes.

Handling playback

If you have both TAB and notation staves, representing the same pitches, it is probably simplest to mute the TAB staff and playback the notation staff. That way, the fact that the fretted 5th string notes are going to playback wrong is hidden. As long as both staves represent the same sound, it is the simplest choice.

You can instead do what was described above, and use the trills, or run the *Banjo Play Fretted 5th String* plugin. I would make the banjo TAB play back I had to ensure that the 2 staves played the same, but probably not otherwise.

5th string fretted notes: Copying from TAB to notation staves.

If you have fretted notes on the 5th string and they are properly adjusted by 5 frets, then these notes will be 5 half steps (a perfect 4th) too high when they are copied to a notation staff.

So the tedious but obvious thing to do is to mark where these notes are and transpose them down 5 frets (a perfect 4th) in the notation staff.

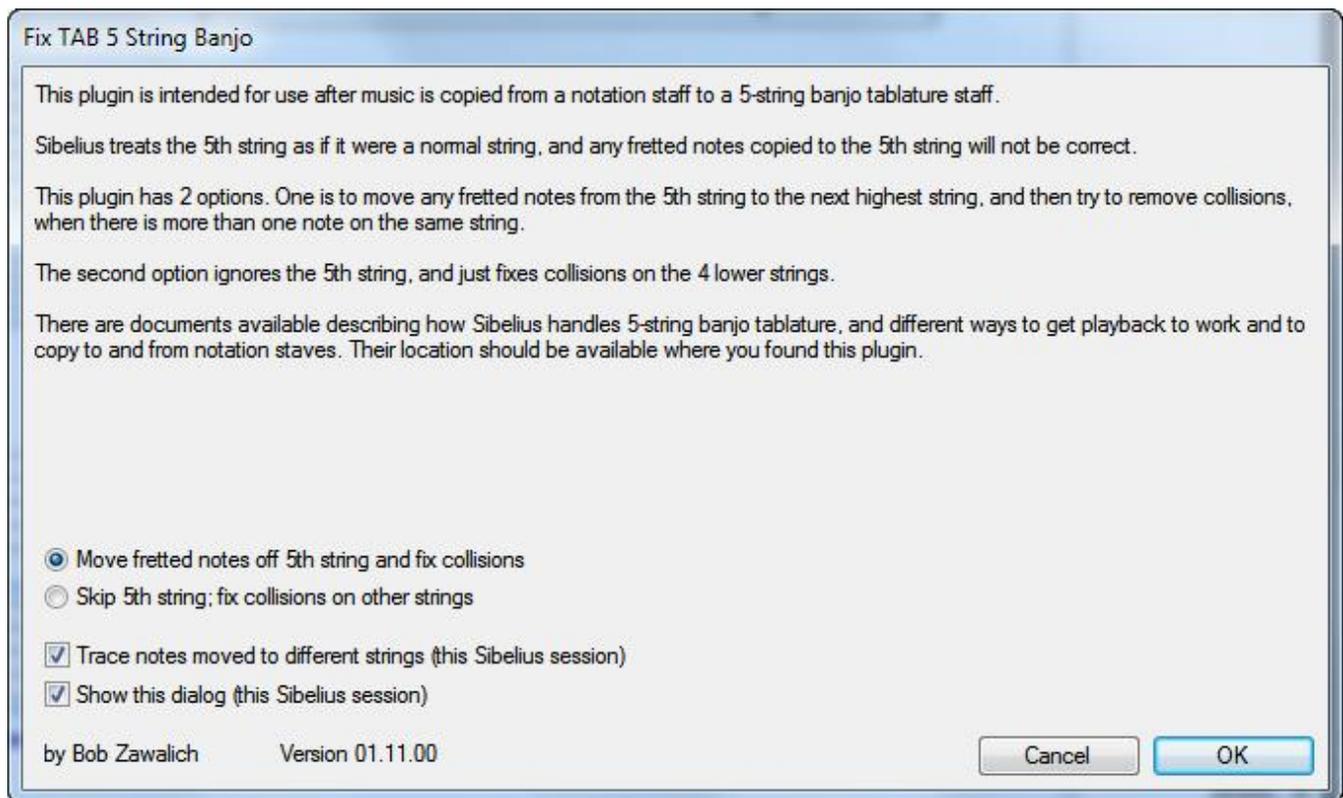
(If you have run *Banjo Play Fretted 5th String*, any affected notes will copy over as 2-note chords, with a silenced top note. Those are at least easier to find so you can delete the top note).

5th string fretted notes: Copying from notation to TAB staves.

This is basically the reverse problem. If the copy puts any notes onto the 5th string as fretted notes, they will be in the wrong place, and you will want to add 5 frets to any such notes if you want to keep them on the 5th string. Otherwise you can drag them to the first string (or use the *Fix TAB 5-String Banjo* plugin, which will do that).

Currently available Banjo plugins

Fix TAB 5-String Banjo



This plugin has 2 main functions. The first is to move any fretted notes off the 5th string; typically you would use this if you had copied music from a notation staff to a TAB staff, and did not want any fretted 5th string notes.

The plugin will move the notes it finds to the next highest string (the first string), and then it tries to remove collisions (more than one note on the same string at the same location).

The second option only does collision removal on the lower 4 strings.

Do not run this plugin with the Move fretted notes option after running *Banjo Play Fretted 5th String*, since that plugin intentionally adds collided notes to the 5th string for playback purposes.

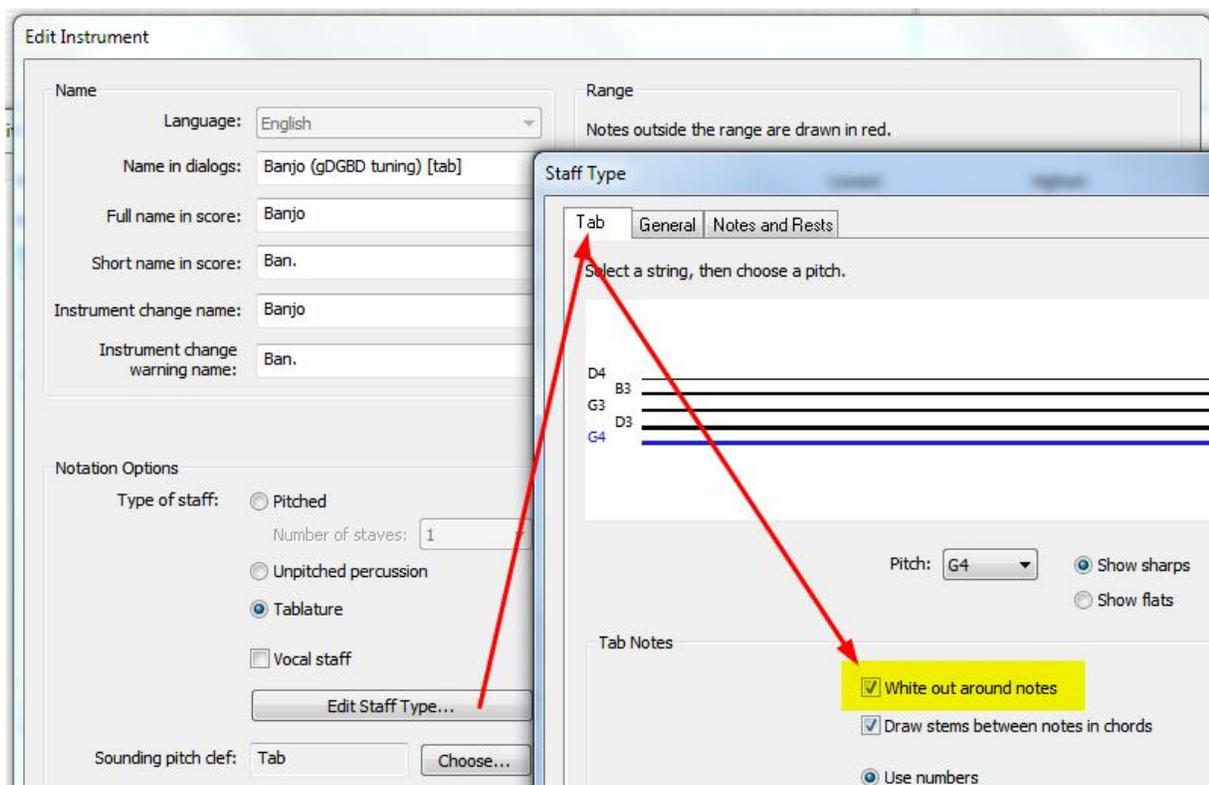
Banjo Play Fretted 5th String



This can be used for TAB-only playback. It finds notes above the 5th fret on the 5th string, changes the notehead to be silent (which looks no different in TAB), and then adds a sounding note 5 frets lower on the same string. The result is that you see the higher note (for example, on fret 7), but hear the note on fret 2, which is the desired pitch as far as Sibelius is concerned.

This works well for its intended purpose, but it has issues and limitations.

1. Be sure that the TAB staff is set to white out around notes. If not, you will see both TAB numbers.



2. If you click on a visible note, you will not hear it, since it is silenced. Drag it to another string temporarily if you need to hear the other note.
3. If you change the pitch of the visible note, the other pitch does not change. Running the plugin again will not help. If you change a pitch, drag the note to another string and change the lower pitch to match, or delete the lower pitch and rerun the plugin.
4. If you copy this music to a notation staff, you will see some 2-note chords; the top note will be silenced, so the "chord" will still play back correctly, but you should delete the upper, silenced, notes if you do this.

Potential plugins

Plugins could probably be written that could handle copy/paste with adjustment as described above, but there are no such plugins as of this writing.

If I were to write such plugins, I would probably write plugins that adjusted pitches after they were pasted.

So after pasting from a notation staff to a TAB staff, a plugin could add 5 frets to anything on the 5th string above fret 0.

After pasting from a TAB staff to a notation staff, a plugin could subtract 5 half steps/frets/semitones from any notes that were on the 5th string originally, and were at fret 6 or higher.

The last one is a bit tricky, as we would need to know the tuning of the TAB staff, and the notes would have had to retain the string number when copying. But it is probably doable, at least in a fairly clunky manner.