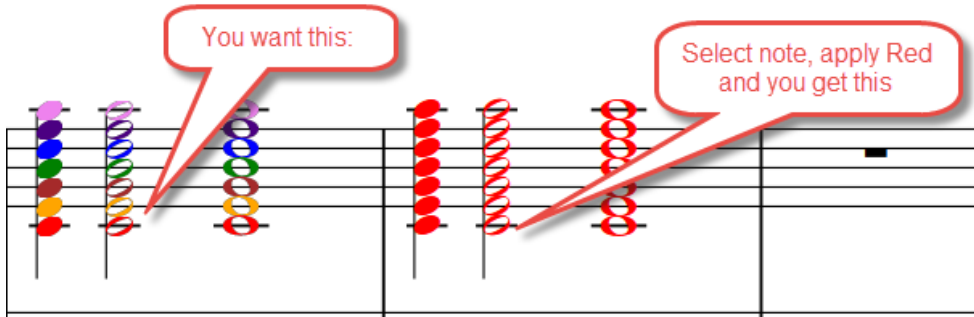


# Coloring Notes in Sibelius Using Colored Notehead Styles

Bob Zawalich November 10, 2016

## The problem: coloring notes in chords

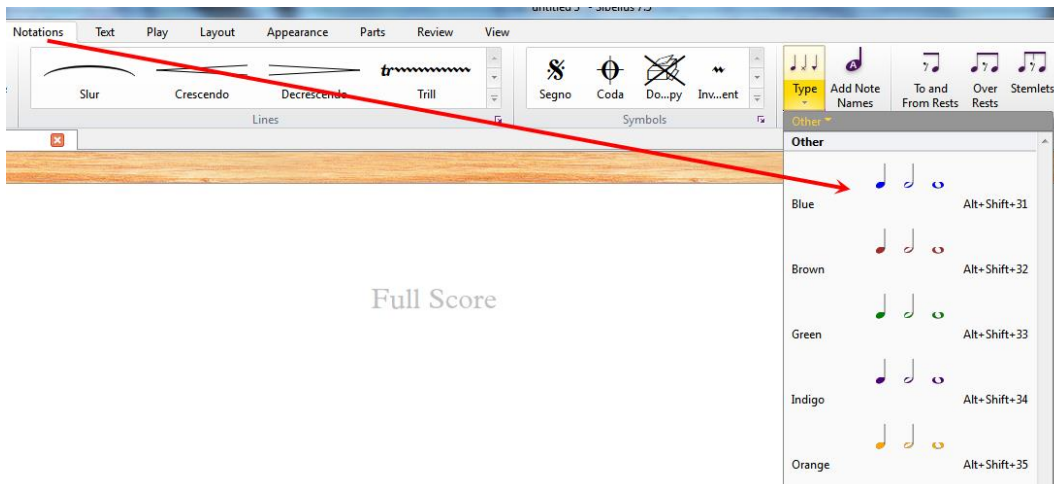
Sibelius has long had the ability to apply colors to notes, as well as to other objects. Unfortunately, if you apply a color to any note in a chord of notes in the same voice, all the notes in that chord will be given the same color.



I note that as of Sibelius 8.3, individual notes can have their own color, so you will not need to use these plugins to get colored notes in a chord. (Yay!)

## One solution: apply noteheads with colors to notes (Sibelius 7 and later only)

Kai Struck and I have recently developed a mechanism allowing noteheads to have individual colors in chords. Our solution is to create special colored notehead styles, which can be applied to notes using Notations > Noteheads > Type.

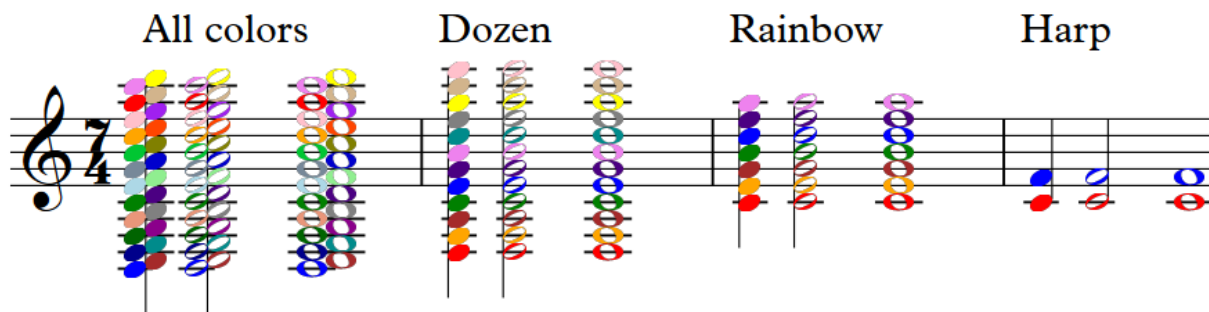


Here is the set of colors we have made available:



*White* is also now available, though it does not appear in this illustration.

There are also collections of colors that can be imported as a group of 25, 12, 7, or 2 colors, which gives you access to colored noteheads even in a score that does not have room for the full set of 25 colors. *Rainbow* replaces the expected *yellow* with *brown*, since *yellow* notes are very hard to see.



This document will describe how Colored Notehead Styles can be used, and describes some tools to make it easier.

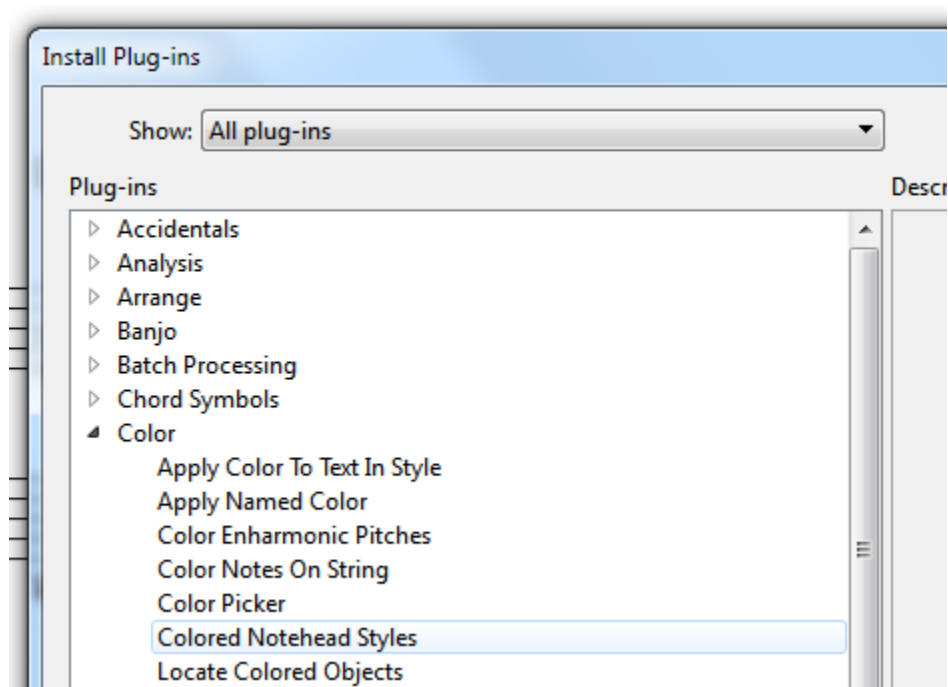
## How to use Colored Notehead Styles

Below you will find details about various things you can do with colored notehead styles, but using them really boils down to this.

1. Install the plugin suite *Colored Notehead Styles* with the Sibelius 7 Plugin Installer from category *Color*.
2. Install the plugin *Color Enharmonic Pitches*, also from category *Color*.
3. Run *Color Enharmonic Pitches* to add colors to your notes, according to their pitch. This is described in more detail below.
4. To remove colored noteheads, select the colored notes and apply the notehead style *Normal* from *Notations > Noteheads > Type*.

## The Colored Noteheads Plugin Suite

Files and plugins for managing colored notehead styles can be installed using the Sibelius 7 plugin installer found at *File > Plug-ins > Install Plug-ins*. In the installer, go to *All plug-ins*, and category *Color*, and install *Colored Notehead Styles*.



This will install several plugins:

*Import Colored Notehead Styles*  
*Colored Noteheads On Harp Strings*  
*Colored Noteheads On Strings*  
*Remove Colored Noteheads*  
*Colored Notehead Data File*

and will place 2 data files, *Colored Notehead Styles.sib* and *Colored Notehead Styles\_Bordered.sib*, in the *For plug-ins* subfolder of your user *Manuscript papers* folder. (Don't worry about this).

There are some other plugins that are not in the suite but which can also work with colored notehead styles. These are:

*Color Enharmonic Pitches* (category *Color*)

*Filter Other* (category *Filter and Find*)

## The Details

The data file *Colored Notehead Styles.sib* and the plugin *Import Colored Notehead Styles* must be installed for anything else to work, and these will be installed if you use the Sibelius 7 Plugin Installer to install *Colored Notehead Styles*.

*Colored Notehead Styles.sib* contains notes with colored notehead styles, and the plugins will copy notes from that score into the score you are working on as a way to import the style definitions. When you run one of the colored notehead plugins you will see a score with colored notes briefly appear on the screen, then go away, as notes are copied from it and pasted into the working score. If something unexpected happens, and the score with the colored noteheads is not closed, just close it without saving changes. It is only a copy of the data file, so the original data file will not be affected.

Once you have installed the suite, you should install the current version of *Color Enharmonic Pitches* (category *Color*), which is the major tool available, and *Filter Other* (category *Filter and Find*).

*Color Enharmonic Pitches* lets you specify colors for any pitches in the selection. It will import the full set of 25 colors. *If your score has a notehead style number greater than 39, the option to use colored notehead styles will be disabled*, and you will need to use other mechanisms to use colored notehead styles with that score.

If you have room to import the notehead styles, you will see this dialog, with the option to use colored notehead styles enabled.

Choose colors to apply to selected notes. If you want equivalent sounding pitches (such as C# and Db) to be colored the same, use the *Sharp = Flat* or *Flat = Sharp* buttons.

*Save as Defaults* sets the colors currently in the dialog to be the default colors. *Set to Defaults* sets all the note names lists to Leave color as is or the colors saved in 'Save as Defaults'.

To set only a few colors, use *All Black* to make all pitches black, or *Clear All* to mark all pitches unchanged (*Leave color as is*), and then choose the pitches you want to color.

**Color Enharmonic Pitches**

This plug-in allows you to specify a color for individual pitches, using separate colors for enharmonically equivalent pitches (such as F#/Gb). If a note in a chord is colored, all notes in the chord will have the same color unless colored notehead styles are used. See help for more details.

Double sharps and flats can be one color, colored the same as an enharmonic pitch (Gx -> A), or colored the same as a single accidental (Gx -> G#).  
 Quartertones can be colored as the nearest flat or sharp.

If you select a color from the double/quartertone lists, all such notes will get the same color, regardless of pitch.

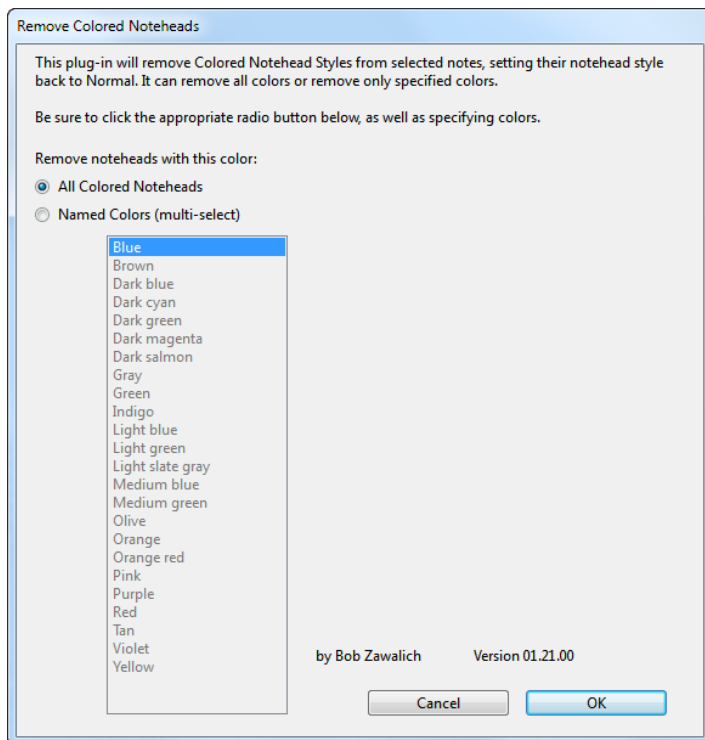
Cb	Leave color as is	G#	Leave color as is	Coloring transposing instruments: <input type="radio"/> Color written pitches <input checked="" type="radio"/> Color sounding pitches <input checked="" type="checkbox"/> Use colored notehead styles, not colors (Sibelius 7 or later)
C	Leave color as is	Ab	Leave color as is	
C#	Leave color as is	A	Leave color as is	
Db	Leave color as is	A#	Leave color as is	
D	Leave color as is	Bb	Leave color as is	
D#	Leave color as is	B	Leave color as is	
Eb	Leave color as is	B#	Leave color as is	
E	Leave color as is	Double Sharps	Same as enharmonic pitch	
E#	Leave color as is	Double Flats	Same as enharmonic pitch	
Fb	Leave color as is	1/4 Sharp Quartertone	Same as nearest semitone	
F	Leave color as is	3/4 Sharp Quartertone	Same as nearest semitone	
F#	Leave color as is	1/4 Flat Quartertone	Same as nearest semitone	
Gb	Leave color as is	3/4 Flat Quartertone	Same as nearest semitone	
G	Leave color as is			

Clear All    All Black    Set to Defaults    Save as Defaults

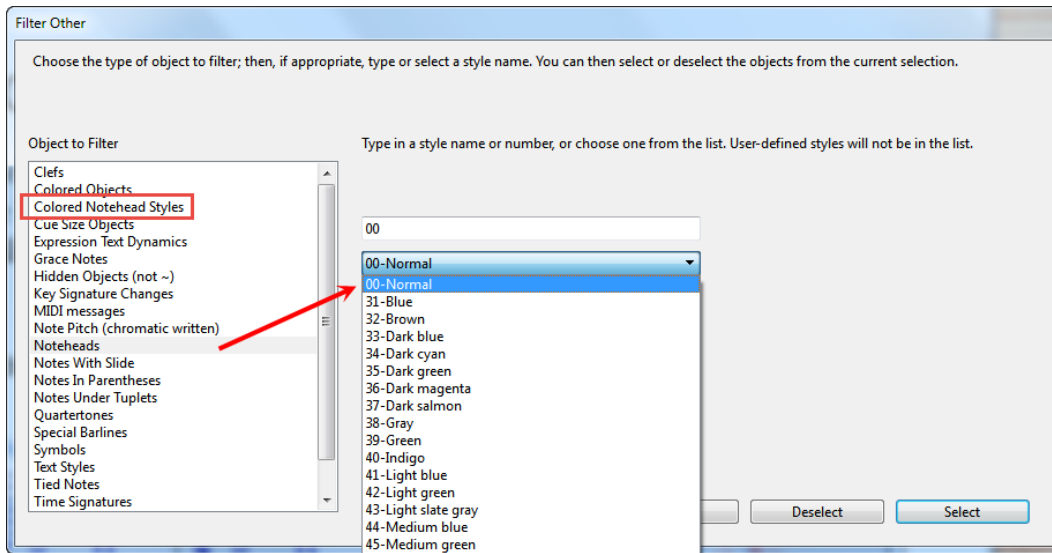
by Bob Zawalich    Version 03.10.00    Sharp = Flat    Flat = Sharp

Edit Colors...    Help...    Cancel    OK

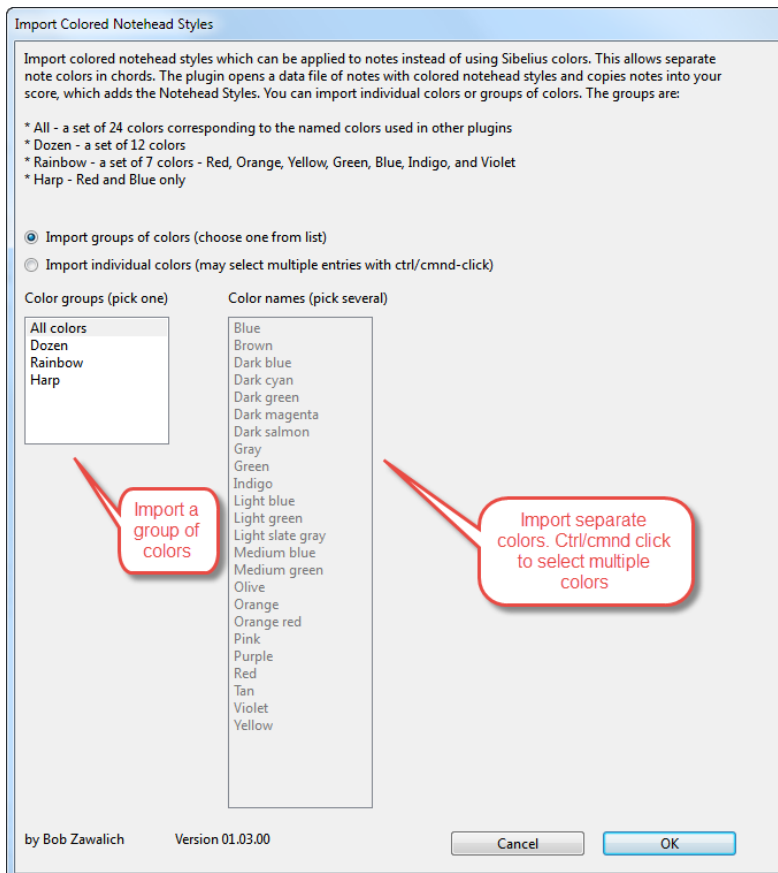
To remove colored notehead styles for notes, select them and use *Notations > Noteheads > Type* to set the notehead style to *Normal*, or run the plugin *Remove Colored Notehead Styles*, which will remove some or all colored noteheads, giving them *Normal* style. Or you can run *Color Enharmonic Pitches* and use the *All Black* option.



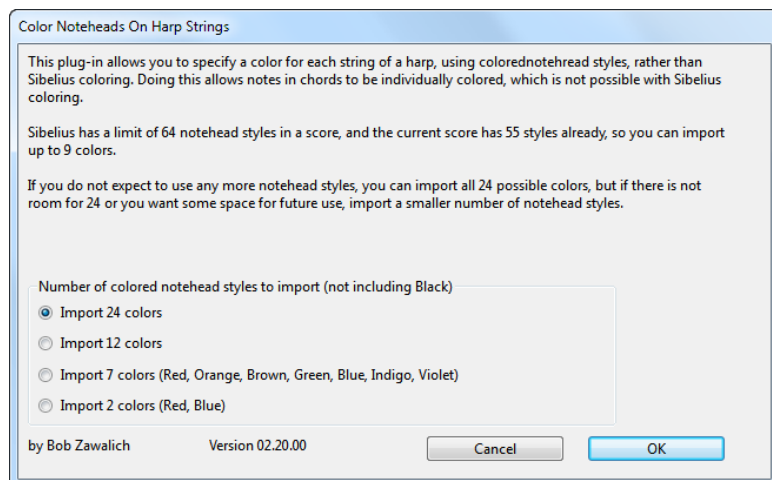
The plugin *Filter Other*, which is not part of the suite but which can be installed from category *Filter and Find*, can filter for a specific colored notehead style using *Noteheads*, or for all colored notehead styles, using *Colored Notehead Styles*. At present, the *Colored Objects* entry will not filter notes with colored notehead styles.



If your score does not have room for the 25 notehead styles that *Color Enharmonic Pitches* needs, you can import a smaller set by running *Import Colored Notehead Styles*, and then apply the styles manually to pitches using *Notations > Noteheads > Type*. When you run *Import Colored Notehead Styles*, you can choose colors from this dialog:

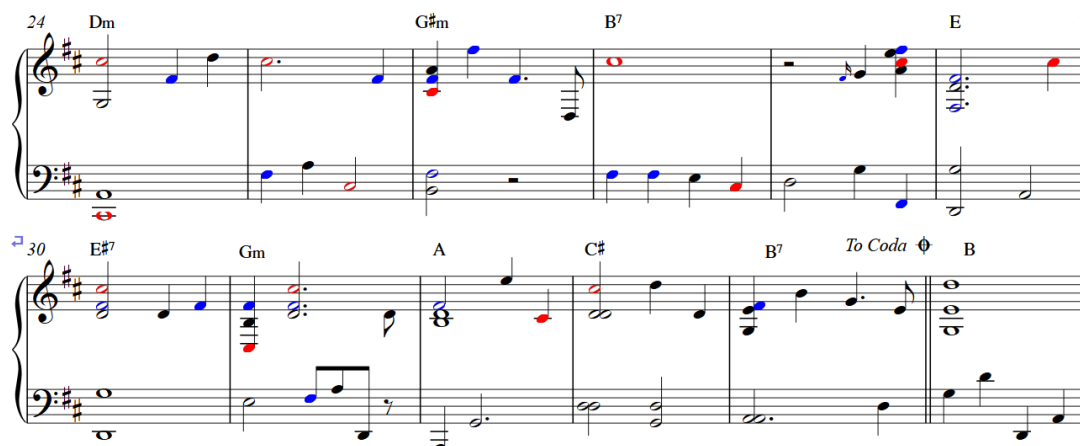
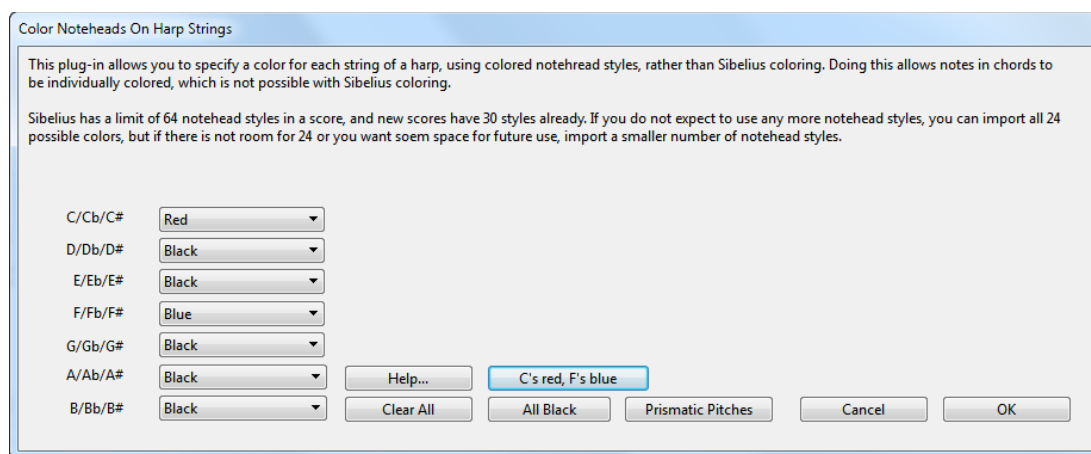


One special plugin, *Color Noteheads on Harp Strings*, is intended for use only with harps. It will allow you to import different numbers of colors using this dialog:



Once you import the notehead styles, you can apply colors to notes based upon which string they are found on a harp, rather than being based on the pitch. On a harp, the pitches Cb, C, and C# will be on the same string, though not at the same time, using pedals or levers to change the pitches.

Here is one example, where notes on all strings except the C and F strings will be black, while the C string notes will be Red, and the F string notes will be Blue.



*Colored Noteheads On Strings* is a similar plugin that colors notes on stringed instruments with fingerboards based on which string the notes are located. Unlike harps, on these instruments the same note can be present on multiple strings, and different mechanisms need to be used to determine the mapping of pitches and strings.

The document *String numbers for notes in stringed instruments in Sibelius*, included in this zip file, discusses different ways to associate strings with pitches. It should be read before using the plugin.

## Colored notehead styles: differences and limitations

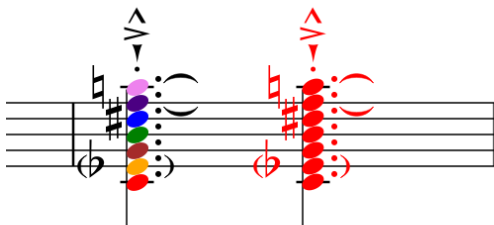
The major advantage of using colored notehead styles is that each note in a color can have its own color, but the colored notes produced by colored notehead styles look different than those produced by applying color to notes using Home > Edit > Color.

If colored notehead styles are used, only the notehead itself is colored. Accidentals, accents, ties, brackets, and rhythm dots, which are given the note color using normal coloring, are left black when colored notehead styles are used. This is not unprecedented – if you use View > Note Colors > Voice Colors, you will also see only the noteheads colored, as in the example below.



*coloring using Voice Colors*

I actually prefer the way the notes look with only the colored notehead, and it really makes sense to not color accents in a chord, but you should be aware that the appearance will be different if you color with colored notehead styles.



*notehead styles vs. colored notes*

There are some definite limitations involved in using colored notehead styles. The major one is that Sibelius has an internal limit of 64 notehead styles in a score. You can create more, but any style with a number over 63 will not give the correct result. A new score in Sibelius 7 will come with 31 notehead styles already included, so you can add at most 33 new styles.

The plugins try to be smart about this. They will check to see if any of the notehead styles you are asking to import are already defined in the target score. If they are defined, the style will not count against the total number allowed, and styles will not be imported multiple times.

Another limitation is that a colored notehead style must specify a note shape. We have chosen to create colored notehead styles for *Opus* noteheads in the *Normal* shape. If you want colored noteheads for other fonts or other noteheads, it is possible to create them, and instructions will be given in this document, but it is not trivial to do that.

What we have done is to make available a set of 25 colored noteheads based on the *Normal* shape of the *Opus* font. The colors I have chosen match the “named” colors I have used in plugins such as *Apply Name Colors*, *Color Enharmonic Pitches*, and others. 25 Notehead styles can be added safely to any score that does not have any user-defined notehead styles.

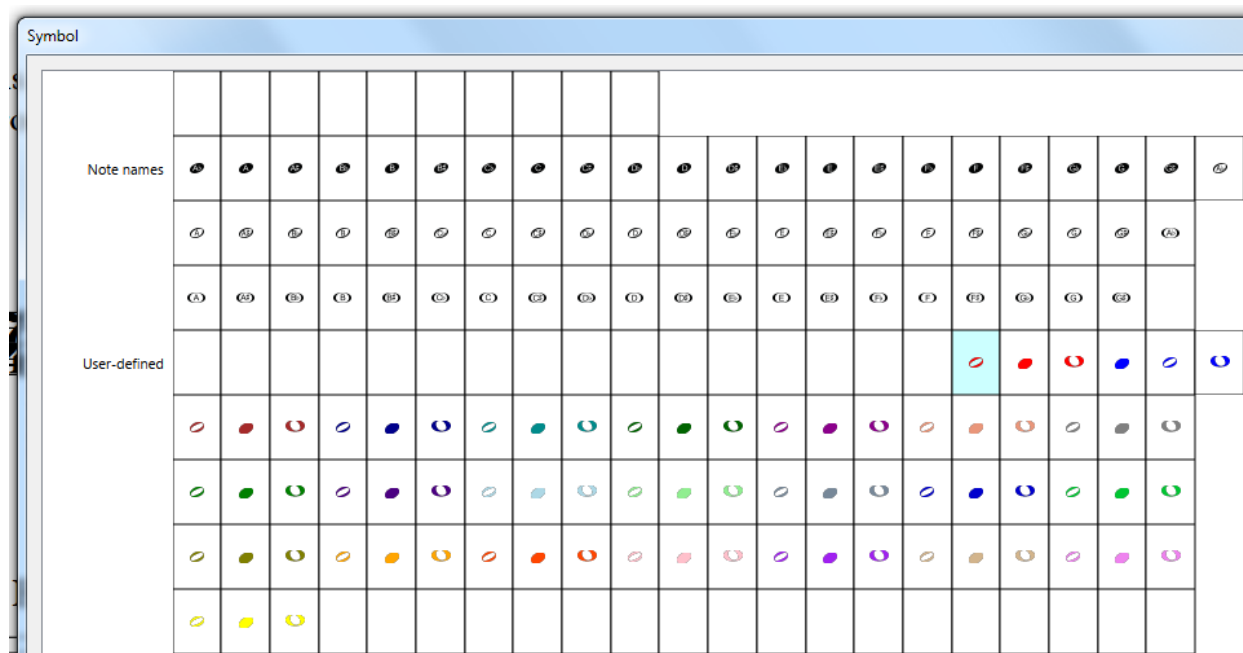
To set a note to the equivalent of the color Black, set its notehead style to be *Normal*. Most of the plugins will not apply a colored notehead styles to a note if it has a style other than *Normal* or one of the colored notehead styles, so cross and beat noteheads will not be changed by the plugins.

## How everything works, featuring the Data File

The file *Colored Notehead Styles.sib* is a Sibelius version 7.1-format score containing notes that have special notehead styles.

To make up those styles, Kai Struck took my list of RGB color values used in other plugins, and made up a set of quarter note, half note, and whole note noteheads, linking to the Opus font note shapes, as SVG graphics files for each color. (Kai actually made up noteheads for many more colors than these, but these are all that I wanted to use).

I created a set of symbols in a new Sibelius 7 score for each of these noteheads, and you can see them in Notations > Symbols > Edit Symbol if you look in a score with imported colored notehead styles.



I then created 25 notestyles, each notestyle using the 3 symbols for each color. We did not create color versions of the double whole notes because we doubted anyone would use them.

My plan was to create House Styles for these, and then import the noteheads into a score. Unfortunately, when you import notehead styles, you also get the text styles from that House Style, and if you had something like an *Inkpen* or *Reprise* score, the text would be replaced, which was not desirable.

So I decided that I would just create a score from which notes could be copied into another score, and then the notes could be deleted from that score. Even after deleting, this imports the symbols and notehead styles associated with the pasted notes.

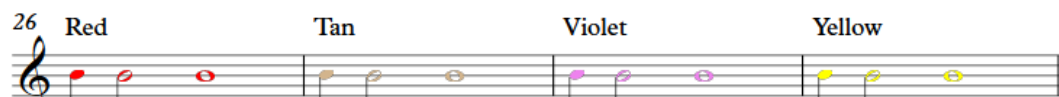
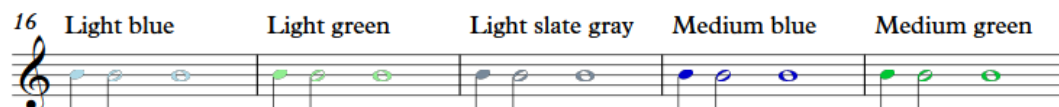
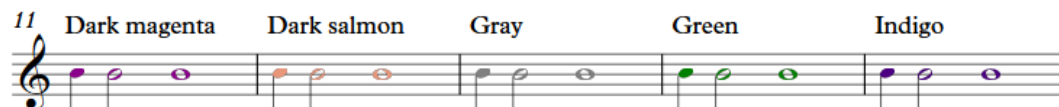
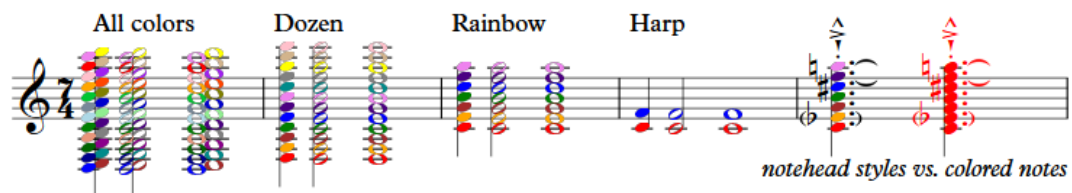
Eventually, plugins were written that would read the data file to find the notes it wanted, and copy them into the target score. The data file, which acts as a database for the plugins, looks like this:

# Colored Notehead Styles

Notes colored with notehead styles retain their colors when in chords,  
and will have black accidentals, articulations, rhythms dots, etc.,  
unlike notes colored with Sibelius' coloring.

Symbols and Notehead styles  
were produced by Bob Zawalich

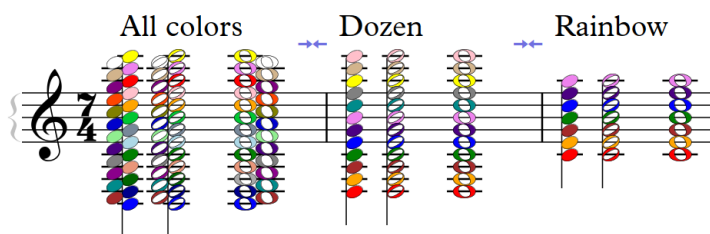
SVG graphics files used in notehead  
symbols were produced by Kai Struck



Each bar has a piece of text that identifies the notehead style, and it has a set of quarter, half, and whole notes that use that notehead style.

## Making your own custom data score

The current version of the plugin suite allows you to create multiple data scores that contain different notehead definitions. The suite contains *Colored Notehead Styles.sib* and *Colored Notehead Styles\_Bordered.sib*, which uses colored noteheads with borders.

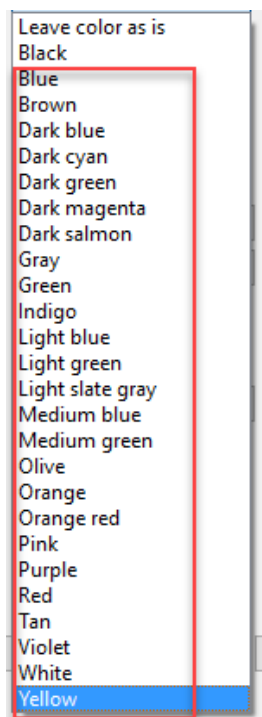


**Be careful to only use one set of custom notehead styles in a single score.** The symbol names will get duplicated otherwise, and the second set will not be found. There is no easy way to get rid of a set of notehead symbols once they are created, so it is best to never create them.

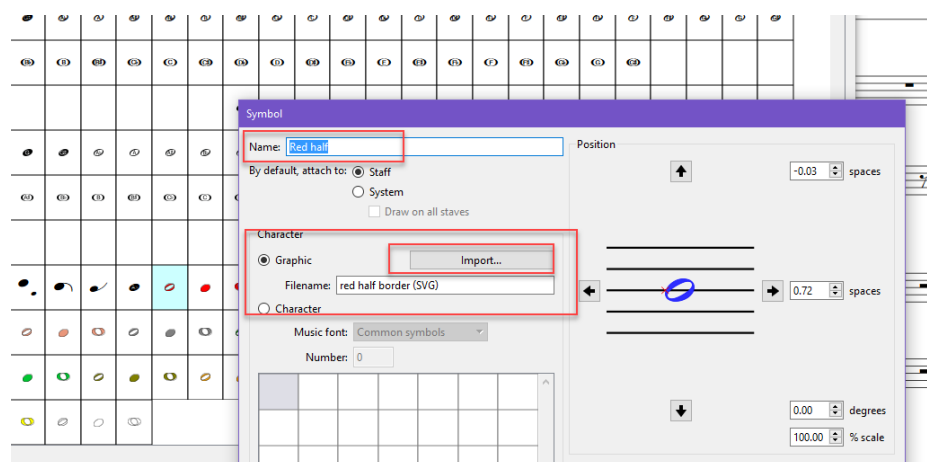
You can create any noteheads you like using SVG graphics for the symbols. If you want to take advantage of the plugins to assign notehead styles to pitches you need to create a data score with a very specific format.

You can make up a custom data file this way:

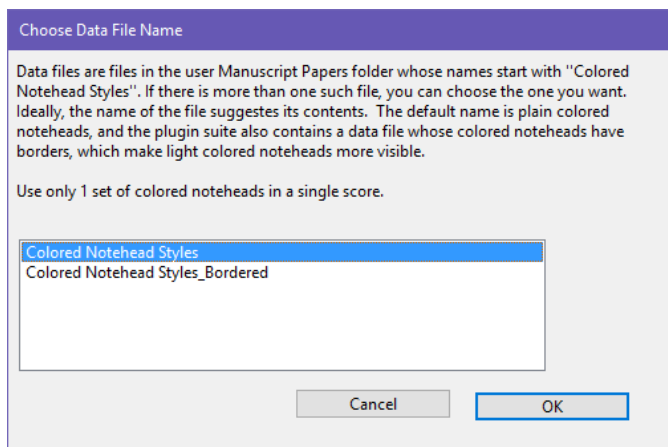
- Make a copy of the original *Colored NoteheadStyle.sib* and give it a unique name that adds a suffix to that name, as in my example *Colored Notehead Styles\_Bordered.sib*. Save it in the *For Plug-ins* folder of your user *Manuscript paper* folder, which is where the original score was installed.
- You must keep the same symbol names and notehead style names to allow the plugin to find the noteheads. You can, however, replace the **definition** of the symbols that make up the noteheads. For example, I edited the symbol *Red Half*, which is used in the notehead style *Red*. I imported a different SVG graphic into the symbol and made the appropriate scale and position adjustments. I did not change the symbol name. So now it uses a colored bordered notehead symbol. I did this for 25\*3 symbols to change all the notehead colors I support. I did not have to change the notehead style definitions at all
- Please note that in the data score the symbols for the color White, which was added later, are not adjacent to the other colored noteheads. Don't miss them if you are changing symbols.
- If you want to use the plugins, you have only 25 color names to use as notehead style names (in addition to Black, which is the notehead style Normal, not a separate SVG color).



- You can put *any* SVG file you want in any of the replaced symbols so you can reuse a name for a different color or even shape if your desired color name is not available.



If you have created the custom data score and its name starts with *Colored NoteheadStyle.sib*, and it is stored in the *For Plug-ins* subfolder of the user *Manuscript paper* folder, then you should see a dialog come up when you use Color Enharmonic Pitches and other plugins in the suite, and you can choose to use that as your data file.



## The history of this project, and how things were done

I was answering questions on the Sibelius tech support forum about the Add Notehead Names plugin, and Kai Struck kept asking questions about how the notehead styles in that plugin were created. He eventually created some SVG graphics to make up solfege noteheads. I was mentioning my frustration with coloring of noteheads, and he suggested that SVG noteheads could be used for coloring.

I decided that if we limited ourselves to Normal shapes in the Opus font, and to the named colors I use in other plugins, we could get a full set of colors in 25 notehead styles, which would fit in scores that did not already have user defined notehead styles.

Kai agreed to create a set of SVG graphics noteheads for the project, and I created symbols using the graphics, and then made up notehead styles for all these colors. I created a score that used each of the colors (with a quarter, half and whole note for each color) and each color labeled by its name.

My plan was to create house styles using the colors, but I found that when I imported such a house style, it could replace the text in the score with whatever was in the score that made the house style. So instead I decided to copy notes from the data file I had set up and labeled into other scores.

I was considering how to distribute the data file. I could attach it to a post on the tech forum, but those disappear quickly. Then I was playing with the plugin installer, and found that if you put a sib file in the zip file on the download page, it will place the sib file in a "For plug-ins" subfolder added to the user Manuscript Paper folder. What is curious about this is File >New does not see these files, but a plugin can get to them.

I thought that having a plugin create a new score might be a cool mechanism, so I wrote a plugin that just created a new score based on that MS Paper, and it worked fine. It would leave a copy of the data file open, and you could copy out of it and then close the data file without saving, and the original file would not get messed with and corrupted. This became the plugin *Colored Notehead Data File*.

I then thought that it would be useful to have enough tools available so you could do real work with this coloring mechanism. I started incorporating some code to import colored notehead styles into existing plugins and realized that it would be simpler to put all this code into a single separate plugin that other plugins could call. This became *Import Colored Notehead Styles*. I adapted the existing plugin *Color Enharmonic Pitches* to use that code, but decided it was too much work to fit the new code into old plugins. I wrote some new plugins, *Colored Noteheads On Harp Strings* and *Remove Colored Noteheads*, and then modified *Filter Other* to handle these notehead styles.

At this point I figured I had all the code I needed to get work done, and I just needed to document everything. And here we are. I hope you enjoy having properly colored chords!