the `guitar-fretboard` package

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This file describes version 1.0 (2018/10/28)

Contents

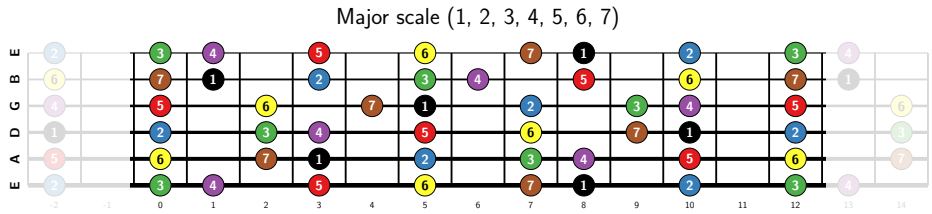
1 Introduction

The `guitar-fretboard` package can be used to generate some nice-looking guitar fretboard diagrams. Those diagrams can highlight scales, arpeggios or more generic intervals on the guitar neck.

It comes with all battery included to allow you to:

- Create scale diagrams in any tonality for any strung instruments (including guitar, bass, ukulele) in both right and left handed configuration.
- Transpose notes or scales.
- Create diagrams in alternate tuning.
- Create generic diagrams with normal, shaded and highlighted notes.
- and more.

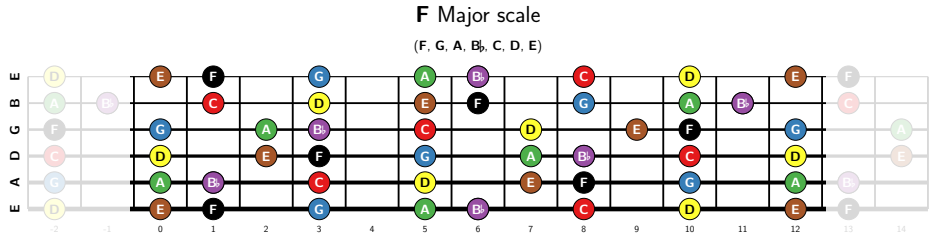
As an example here is the Major scale in key of **C**:




```
\begin{fb}[frets before = 2, frets after = 2,
    legend = {Major scale (1, 2, 3, 4, 5, 6, 7)},
    scale=0.35, fret numbers]
  \foreach \i in {1, 2, 3, 4, 5, 6, 7} {
    \note[split]{\i}
  }
\end{fb}
```

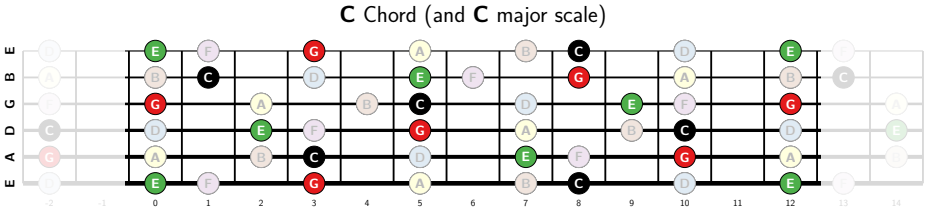
The major scale consists of following intervals from the tonic (root) note: perfect unison, major second, major third, perfect fourth, perfect fifth, major sixth and major seventh. These intervals are represented as {1,2,3,4,5,6,7}. Each interval has its own color for an easier lookup and memorization.

The note names can be displayed instead of intervals. The **F** Major scale is composed of **F**, **G**, **A**, **B♭**, **C**, **D** and **E**. The **F** scale is the same as **C** but raised up by 5 semitones. `guitar-fretboard` is able to transpose and convert the pitch name accordingly. Please note that the pitch transposition is semitone-based and may not be always accurate in terms of harmony since intervals are not used in the process.



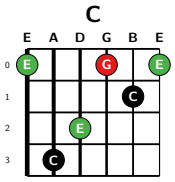

```
\begin{fb}[frets before = 2, frets after = 2,
    transpose = 5,
    transpose pitch,
    legend = {\pF Major scale\\\Large (\pF, \pG, \pA, \pBb, \pC, \pD, \pE)},
    scale=0.35,
    fret numbers]
  \foreach \i in { C, D, E, F, G, F, A, B} {
    \note[split]{\i}
  }
\end{fb}
```

Chords can also be displayed. In that case you can easily see new **C** chord shapes showing up. If you are playing in **C** Major, the scale can also be displayed. This helps you to find new embellishments when soloing:



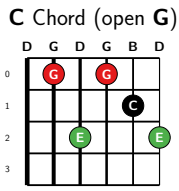

```
\begin{fb}[frets before = 2, frets after = 2,
    legend = {\pC Chord (and \pC major scale)},
    scale = 0.35,
    fret numbers]
  \foreach \i in {C, E, G} {
    \note{\i}
  }
  \foreach \i in {D, F, A, B} {
    \note[shade]{\i}
  }
\end{fb}
```

The **C** chord can also be displayed in a more classical way. Use the ⟨*chord*⟩ option for that in addition with the ⟨*limit*⟩ option which helps to only show the **G** on the 3rd string.




```
\begin{fb}[frets min = 0, frets max = 3, fret numbers,
    legend = {\pC}, chord, scale=0.35]
  \note{C} \note{E} \note[limit={3}]{G}
\end{fb}
```

How this the **C** chord looks like when the guitar is open **G** tuned? Again `guitar-fretboard` does all the magic for you as long as you ask nicely.

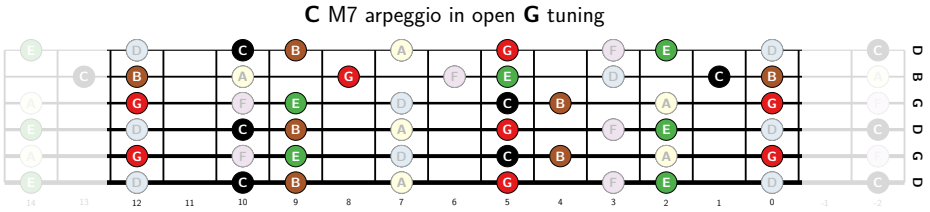



```
\begin{fb}[frets min = 0, frets max = 3,
    chord, tuning = \tuning{guitar/open g},
    legend = {\pC Chord (open \pG)},
    fret numbers, scale=0.35]
  \note{C} \note[limit={1,4}]{E} \note{G}
```

```
\end{fb}
```

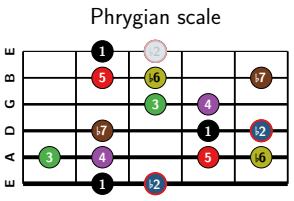
As you can see, setting the ⟨*tuning*⟩ option update the whole fretboard. This is very easy to create some new diagrams in different tunings.

Now let's figure out how a left-handed guitarist can practice the **C** M7 arpeggio (and the whole major scale) in open **G** tuning:




```
\begin{fb}[frets before = 2, frets after = 2,
    tuning = \tuning{guitar/open g}, left handed,
    legend = {\pC M7 arpeggio in open \pG tuning},
    fret numbers, scale=0.35]
  \foreach \i in {C, E, G, B} {
    \note{\i}
  }
  \foreach \i in {D, F, A} {
    \note[shade]{\i}
  }
\end{fb}
```

If you want to display a scale mode you can also emphasis the characteristic notes (the note that colors the mode, you want to play that note). Here is an example with a generic Phrygian mode:




```
\begin{fb}[frets min=2, frets max=6,
    transpose = -5,
    legend = {Phrygian scale}, scale=0.35]
  \foreach \i in {1,b2, 3, 4, 5,b6,b7} {
    \note{\i}
  }
  \note[highlight]{b2}
  \note[highlight, shade, limit={1}]{b2}
\end{fb}
```

2 Definitions

Under the hood all computations are made using semitones (from 0 to 11) relative to **C**. In the annexes you can find all pitches (notes), intervals and colors defined in `guitar-fretboard`.

2.1 Styles

Several global `tikz` styles are defined and can be overridden if they don't fit your needs. All thier default values are not listed here, please have a look to the `guitar-fretboard` definition file if you are curious about it.

The main point is that you can override them globally using the `\tikzset` command or just when you need in the `fb`→P. 6 environment or when using the `\note`→P. 8 command.

`/tikz/fretboard=style`

The style to be passed to the Tikz picture. From here you can change the background color and many other things supported by the `tikzpicture` environment.
Both ⟨*xscale*⟩ and ⟨*yscale*⟩ are set here for an optimal render in scale, chord and lefty modes. Don't change them unless you really known what you are doing. By default the `x` size is twice the `y` size in scale mode. In chord mode, the `x` `y` ratio is 1.2.

`/tikz/fret=style`

This style is used to draw the frets. You can change it is you want colored frets or larger lines to draw the frets.

`/tikz/fret numbers=style`

This style is used for the fret numbering. By default the font is given by the `\fretfont` command.

`/tikz/fret numbers position=style` ({ shift = {(0, 0.75)}})

This style is used is a tikz scope to shift the fret numbers. the default value should fit all cases. If you want to place the fret numbers somewhere else, you can use this option but you might need to try several values.
Be careful with shift values since they are cumulative. Thus use (0, −0.75) to reset the position.

`/tikz/string tuning=style`

This style is used for the string labeling. By default the font is given by the `\stringfont` command.

`/tikz/string tuning position=style` ({ shift = {(-0.75, 1)}})

Same as `/tikz/fret numbers position` but for the string labels.

`/tikz/string=style`

Same as `/tikz/fret` but for the strings. You can control everything but the sting width which is overridden by both `/fb/string width`→P. 7 and `/fb/string factor`→P. 7.

/tikz/overlay=style

This style is used to fade out the /fb/frets before → P. 7 and /fb/frets after → P. 7 to help focus on the main part of the neck.

/tikz/legend=style

This style is used for the diagram legend. By default the font is given by the \labelfont command.

/tikz/legend position=style ({ shift = {(0, -0.75)}})

Same as /tikz/fret numbers position → P. 5 but for the diagram legend. Be careful when you change it because in chord mode, $(-0.75,\ 0.75)$ is added to this value. Again you may need to experiment several values if you really want to customize the label position..

/tikz/note=style

This style is used when drawing a note on the fretboard. By default the \notefont is used.

/tikz/note split=style

This style is used when drawing a split note on the fretboard. Used in addition of /tikz/note to draw a circle split and reduce the font size.

/tikz/note shade=style

This style is used when shading a non important note on the fretboard. Used in addition of /tikz/note to add an overlay to the note.

/tikz/note highlight=style

This style is used when highlighting an important note on the fretboard. Used in addition of /tikz/note to mark to the note.

2.2 Fretboard

\begin{fb}[⟨*options*⟩]
⟨*environment content*⟩
\end{fb}

This is the main part of the guitar-fretboard engine which is responsible to draw the frets, the strings, the labels and put everything together.
You can control the default settings by defining several options all relative to the /fb path.

/fb/tuning=tuning ({ 4, 9, 2, 7, 11, 4 })

The instrument tuning. You can select a pre-defined tuning with the \tuning → P. 8 command or provide your own. Each string is identified by a semitone value (relative to **C**). The strings order is from low to high.

/fb/frets min=0 (0)

The value of the lowest fret on the main fretboard section.

/fb/frets max=12 (12)

The value of the highest fret on the main fretboard section.

/fb/frets before=0 (0)

Number of frets to extend the fretboard before the main part. This are will be shaded.

/fb/frets after=0 (0)

Number of frets to extend the fretboard after the main part. This are will be shaded.

/fb/frets offset=0.5 (0.5)

By default the frets are shifted from the grid to make note placement easier. Do not change this value or your fretboard will be mangled.

/fb/frets numbers=boolean (false)

Set to true to show the fret numbers.

/fb/string width=0.5pt (0.5pt)

The width of the higher string.

/fb/string factor=0.75pt (0.75pt)

The string width growing factor when drawing frets from highest to lower.

/fb/show tuning=boolean (true)

Set to false to hide the string labels at the top of the neck.

/fb/split=boolean (false)

Set to false to show 2 labels in the notes when applicable (only when `/intervals/NOTE/reversed` → P. 9 is set). If note is a pitch both flat and sharp pitch are shown such as **E♭** and **F♯**. In the case of an interval, the reversed interval is shown.

/fb/legend=text

If not blank, the **text** content is used for the diagram legend.

/fb/transpose=semitone (0)

Number of semitone to use to transpose the whole fretboard diagram. If your diagram is the **C** major scale and you want to show the **F** major scale, you will need to change all the notes you entered. Using the transposing option, `guitar-fretboard` will do the job for you by setting a 5-semitone transposition.

/fb/transpose pitch=boolean (false)

When transposing a pitched diagram you may want to display the correct note name on their frets. So you need to transpose pitches or let `guitar-fretboard` do the job for you. Be careful when you use pitches because the resulting names may be wrong (at least not correct in terms of harmony).

`/fb/chord`=boolean (false)

Display the diagram in chord mode (rotate the whole diagram by 90° counter-clockwise and change the fret ratio.

`/fb/scale`=ratio (1)

Scale ratio used to resize the diagram.

`/fb/left handed`=boolean (false)

Display the diagram for left-handed guitarists.

2.3 Useful commands

`\note`[⟨*options*⟩]{⟨*id*⟩}

Place the note referenced by {⟨*id*⟩} on the current fretboard. This command only makes sense in the `fb` →P. 6 environment.
You can override any parameter set in the `\newInterval` command or any `/tikz` style since [⟨*options*⟩] is processed by `\tikzset`.

`\tuning`{⟨*id*⟩}

Retrieves the tuning referenced by {⟨*id*⟩} under the `/fb/tunings` path. See annexes for all pre-defined tunings.

From here are some commands you don't need for you daily usage except if you want to define your own notes.

`\newInterval`[⟨*options*⟩]{⟨*id*⟩}

Create a new note identified by {⟨*id*⟩}. It should respect the `pgfkeys` key syntax. It's better to only use alphanumerical characters. By an arbitrary convention, flats are replaced by `b` and sharps by `S`. Thus a **C♯** is referenced as `CS` and **D♭** by `Db`. See the annexes for all defined pitches and intervals.
The newly created note will be placed under the `/intervals/NOTE` key path.
In addition you can add some [⟨*options*⟩] to the new note. From here a pitch or an interval is referenced as a note.

`/intervals/NOTE/name`=name

The full textual name of the note that can be used for specific usage.

`/intervals/NOTE/degree`=degree

the note degree in the **C** major scale reference (1 or **C**, 2 for **D**, 3 for **E**, etc). the degree does not care about semitones, just about the note base name.

`/intervals/NOTE/tex`=tex

the note representation in a musical environment. This key is used by the `\pX` command where `X` is the note {⟨*id*⟩}. See the annexes for further details.

`/intervals/NOTE/tex small`=tex

Same as `/intervals/NOTE/tex` but used for fretboard limited space. Flats and sharps are smaller (C♯ and C♯).

`/intervals/NOTE/semitones=0` (0)

Semitone distance from the **C** note. This is used to determine the note's place on the fretboard.

`/intervals/NOTE/reversed=note ref`

The reference to the reversed interval {⟨*id*⟩} or equivalent note name.

From this point all other options are only useful when placing a note on the fretboard using the `\note` → P. 8 command to override default behaviors.

`/intervals/NOTE/limit=list, of, strings`

A list of strings (order does not matter) to limit the note placement on the fretboard. For example if you only want to place the note on both 5th and 2nd string, use {2,5} (or {5,2}).

`/intervals/NOTE/style=style`

A complement style definition to `/tikz/note` → P. 6.

`/intervals/NOTE/highlight style=style`

A complement style definition to `/tikz/note highlight` → P. 6.

`/intervals/NOTE/split=boolean` (false)

Split that specific note if set to true.

`/intervals/NOTE/shade=boolean` (false)

Shade that specific note if set to true.

`/intervals/NOTE/highlight=boolean` (false)

Highlight that specific note if set to true.

`\copyInterval[`⟨*options*⟩`]{`⟨*src*⟩`}{`⟨*to*⟩`}`

Copies the note {⟨*src*⟩} to {⟨*to*⟩} and override parameters given in [⟨*options*⟩]. See `\newInterval` → P. 8.

`\getInterval{`⟨*id*⟩`}{`⟨*key*⟩`}`

Retrieves the {⟨*key*⟩} value of the note {⟨*id*⟩}.

2.4 Colors

Colors are predefined (see annexes for the full list).

`\FBnewColor[`⟨*options*⟩`]{`⟨*name*⟩`}{`⟨*spec*⟩`}`

Creates a new color ⟨*name*⟩ using ⟨*spec*⟩ specifications which are the same as the `xcolor` package. This command creates 2 colors, one for the background using ⟨*spec*⟩ and one for the foreground which can be either black or white depending on the background color. The computation is based on the luminance[1] value.

[1] See `https://en.wikipedia.org/wiki/HSL_and_HSV#Lightness`

You want to use either HTML or CMYK color definition. In case of HTML the color ⟨*spec*⟩ is `{RRGGBB}` which is the hexadecimal color composition. If you choose CMYK the definition is `{C, M, Y, K}` for cyan, magenta, yellow and black with a 0 to 1 valid range.
Some options can be passed to to `\FBnewColor` command:

`/fb/colors/limit=limit` (0.5)

The luminance limit. If the background color's luminance if greater than ⟨*limit*⟩, the foreground color is set to black, white otherwise.
You shouldn't change it unless you experiment some strange behaviors.

`/fb/colors/model=model` (HTML)

The color model to use. See the `xcolor` documentation for further information.

`/fb/colors/derive=boolean` (false)

If true, the new color is based on an existing color passed in the ⟨*spec*⟩ argument. Otherwise, a new color is created.

3 Tips

Inserting a lot of diagrams in a document can take long time to build since `tikz` is not very fast. If your diagrams do not change very often, you can generate a standalone PDF and include it in your document.

A very simple example can be:

```
% chords/c-major.tex
\documentclass[]{standalone}
\usepackage{guitar-fretboard}
\begin{document}
\begin{fb}[frets min=0, frets max=4, fret numbers,
    left handed, legend = {\pC}]%
  \note{C} \note{E} \note{G}
\end{fb}%
\end{document}
```

Now you can add the generated PDF using:

```
\includegraphics[width=0.7\textwidth,keepaspectratio]{chords/c-major
↪  .pdf}
```

4 Annexes

4.1 pitches

All semitones are relative to **C**.

id	degree	semitones	tex	tex small	reversed	command
Cbbb	1	-3	C𝄫♭	C𝄫		\PCbbb
Cbb	1	-2	C𝄫	C𝄫		\PCbb

id	degree	semitones	tex	tex small	reversed	command
Cb	1	-1	C$\flat$	C$\flat$		\PCb
C	1	0	C	C		\PC
CS	1	1	C$\sharp$	C$\sharp$	Db	\PCS
CSS	1	2	C$\times$	C$\times$		\PCSS
CSSS	1	3	C$\times\sharp$	C$\times\sharp$		\PCSSS
Dbbb	2	-1	D$\flat\flat\flat$	D$\flat\flat\flat$		\PDbbb
Dbb	2	0	D$\flat\flat$	D$\flat\flat$		\PDbb
Db	2	1	D$\flat$	D$\flat$		\PDb
D	2	2	D	D		\PD
DS	2	3	D$\sharp$	D$\sharp$	Eb	\PDS
DSS	2	4	D$\times$	D$\times$		\PDSS
DSSS	2	3	D$\times\sharp$	D$\times\sharp$		\PDSSS
Ebbb	3	1	E$\flat\flat\flat$	E$\flat\flat\flat$		\PEbbb
Ebb	3	2	E$\flat\flat$	E$\flat\flat$		\PEbb
Eb	3	3	E$\flat$	E$\flat$		\PEb
E	3	4	E	E		\PE
ES	3	5	E$\sharp$	E$\sharp$	F	\PES
ESS	3	6	E$\times$	E$\times$		\PESS
ESSS	3	7	E$\times\sharp$	E$\times\sharp$		\PESSS
Fbbb	4	2	F$\flat\flat\flat$	F$\flat\flat\flat$		\PFbbb
Fbb	4	3	F$\flat\flat$	F$\flat\flat$		\PFbb
Fb	4	4	F$\flat$	F$\flat$		\PFb
F	4	5	F	F		\PF
FS	4	6	F$\sharp$	F$\sharp$	Gb	\PFS
FSS	4	7	F$\times$	F$\times$		\PFSS
FSSS	4	8	F$\times\sharp$	F$\times\sharp$		\PFSSS
Gbbb	5	4	G$\flat\flat\flat$	G$\flat\flat\flat$		\PGbbb
Gbb	5	5	G$\flat\flat$	G$\flat\flat$		\PGbb
Gb	5	6	G$\flat$	G$\flat$		\PGb
G	5	7	G	G		\PG
GS	5	8	G$\sharp$	G$\sharp$	Ab	\PGS
GSS	5	9	G$\times$	G$\times$		\PGSS
GSSS	5	10	G$\times\sharp$	G$\times\sharp$		\PGSSS
Abbb	6	6	A$\flat\flat\flat$	A$\flat\flat\flat$		\PAbbb
Abb	6	7	A$\flat\flat$	A$\flat\flat$		\PAbb
Ab	6	8	A$\flat$	A$\flat$		\PAb
A	6	9	A	A		\PA
AS	6	10	A$\sharp$	A$\sharp$	Bb	\PAS
ASS	6	11	A$\times$	A$\times$		\PASS
ASSS	6	0	A$\times\sharp$	A$\times\sharp$		\PASSS
Bbbb	7	8	B$\flat\flat\flat$	B$\flat\flat\flat$		\PBbbb
Bbb	7	9	B$\flat\flat$	B$\flat\flat$		\PBbb
Bb	7	10	B$\flat$	B$\flat$		\PBb
B	7	11	B	B		\PB
BS	7	0	B$\sharp$	B$\sharp$	C	\PBS
BSS	7	1	B$\times$	B$\times$		\PBSS
BSSS	7	2	B$\times\sharp$	B$\times\sharp$		\PBSSS

4.2 Intervals

id	degree	semitones	name	tex	tex small	reversed
d1	1	-1	Diminished unisson	-1	$\flat$1	A8

id	degree	semitones	name	tex	tex small	reversed
b1	1	-1	Diminished unisson	-1	♭1	A8
1	1	0	Perfect unisson	1	1	8
A1	1	1	Augmented unisson	+1	♯1	d8
S1	1	1	Augmented unisson	+1	♯1	d8
bb2	2	0	Diminished second	-2	𝄫2	A7
d2	2	0	Diminished second	-2	𝄫2	A7
b2	2	1	Minor second	m2	♭2	7
m2	2	1	Minor second	m2	♭2	7
2	2	2	Major second	2	2	m7
A2	2	3	Augmented second	+2	♯2	d7
S2	2	3	Augmented second	+2	♯2	d7
bb3	3	2	Diminished third	-3	𝄫3	A6
d3	3	2	Diminished third	-3	𝄫3	A6
b3	3	3	Minor third	m3	♭3	6
m3	3	3	Minor third	m3	♭3	6
3	3	4	Major third	3	3	m6
A3	3	5	Augmented third	+3	♯3	d6
S3	3	5	Augmented third	+3	♯3	d6
d4	4	4	Diminished fourth	-4	♭4	A5
b4	4	4	Diminished fourth	-4	♭4	A5
4	4	5	Perfect fourth	4	4	5
A4	4	6	Augmented fourth	+4	♯4	d5
S4	4	6	Augmented fourth	+4	♯4	d5
d5	5	6	Diminished fifth	-5	♭5	A4
b5	5	6	Diminished fifth	-5	♭5	A4
5	5	7	Perfect fifth	5	5	4
A5	5	8	Augmented fifth	+5	♯5	d4
S5	5	8	Augmented fifth	+5	♯5	d4
d6	6	7	Diminished sixth	-6	𝄫6	A3
bb6	6	7	Diminished sixth	-6	𝄫6	A3
m6	6	8	Minor sixth	m6	♭6	3
b6	6	8	Minor sixth	m6	♭6	3
6	6	9	Major sixth	6	6	m3
A6	6	10	Augmented sixth	+6	♯6	d3
S6	6	10	Augmented sixth	+6	♯6	d3
d7	7	9	Diminished seventh	-7	𝄫7	A2
bb7	7	9	Diminished seventh	-7	𝄫7	A2
m7	7	10	Minor seventh	m7	♭7	2
b7	7	10	Minor seventh	m7	♭7	2
7	7	11	Major seventh	7	7	m2
A7	7	0	Augmented seventh	+7	♯7	d2
S7	7	0	Augmented seventh	+7	♯7	d2
d8	8	-1	Diminished octave	-8	♭8	A1
b8	8	-1	Diminished octave	-8	♭8	A1
8	8	0	Perfect octave	8	8	1
A8	8	1	Augmented octave	+8	♯8	d1
S8	8	1	Augmented octave	+8	♯8	d1
d9	2	0	Diminished ninth	-9	𝄫9	
bb9	2	0	Diminished ninth	-9	𝄫9	
m9	2	1	Minor ninth	m9	♭9	
b9	2	1	Minor ninth	m9	♭9	
9	2	2	Major ninth	9	9	
A9	2	3	Augmented ninth	+9	♯9	

id	degree	semitones	name	tex	tex small	reversed
S9	2	3	Augmented ninth	+9	♯9	
d11	4	4	Diminished eleventh	-11	♭11	
b11	4	4	Diminished eleventh	-11	♭11	
11	4	5	Perfect eleventh	11	11	
A11	4	6	Augmented eleventh	+11	♯11	
S11	4	6	Augmented eleventh	+11	♯11	
d13	6	7	Diminished thirteenth	-13	𝄫13	
bb13	6	7	Diminished thirteenth	-13	𝄫13	
m13	6	8	Minor thirteenth	m13	♭13	
b13	6	8	Minor thirteenth	m13	♭13	
13	6	9	Major thirteenth	13	13	
A13	6	10	Augmented thirteenth	+13	♯13	
S13	6	10	Augmented thirteenth	+13	♯13	

4.3 Colors

id	RGB name	CMYK name
1bb	RGBbg1bb / fg1bb	bg1bb / fg1bb
1b	RGBbg1b / fg1b	bg1b / fg1b
1	RGBbg1 / fg1	bg1 / fg1
1s	RGBbg1s / fg1s	bg1s / fg1s
1ss	RGBbg1ss / fg1ss	bg1ss / fg1ss
2bb	RGBbg2bb / fg2bb	bg2bb / fg2bb
2b	RGBbg2b / fg2b	bg2b / fg2b
2	RGBbg2 / fg2	bg2 / fg2
2s	RGBbg2s / fg2s	bg2s / fg2s
2ss	RGBbg2ss / fg2ss	bg2ss / fg2ss
3bb	RGBbg3bb / fg3bb	bg3bb / fg3bb
3b	RGBbg3b / fg3b	bg3b / fg3b
3	RGBbg3 / fg3	bg3 / fg3
3s	RGBbg3s / fg3s	bg3s / fg3s
3ss	RGBbg3ss / fg3ss	bg3ss / fg3ss
4bb	RGBbg4bb / fg4bb	bg4bb / fg4bb
4b	RGBbg4b / fg4b	bg4b / fg4b
4	RGBbg4 / fg4	bg4 / fg4
4s	RGBbg4s / fg4s	bg4s / fg4s
4ss	RGBbg4ss / fg4ss	bg4ss / fg4ss
5bb	RGBbg5bb / fg5bb	bg5bb / fg5bb
5b	RGBbg5b / fg5b	bg5b / fg5b
5	RGBbg5 / fg5	bg5 / fg5
5s	RGBbg5s / fg5s	bg5s / fg5s
5ss	RGBbg5ss / fg5ss	bg5ss / fg5ss
6bb	RGBbg6bb / fg6bb	bg6bb / fg6bb
6b	RGBbg6b / fg6b	bg6b / fg6b
6	RGBbg6 / fg6	bg6 / fg6
6s	RGBbg6s / fg6s	bg6s / fg6s
6ss	RGBbg6ss / fg6ss	bg6ss / fg6ss
7bb	RGBbg7bb / fg7bb	bg7bb / fg7bb
7b	RGBbg7b / fg7b	bg7b / fg7b
7	RGBbg7 / fg7	bg7 / fg7
7s	RGBbg7s / fg7s	bg7s / fg7s
7ss	RGBbg7ss / fg7ss	bg7ss / fg7ss