GUITARCHORDSCHEMES

v0.6 2014/09/15

guitar chord schemes and fingering scales with TikZ

Clemens Niederberger

https://bitbucket.org/cgnieder/guitarchordschemes/

contact@mychemistry.eu

Table of Contents

1 License and Requirements 1 2.2 Options for \scales . . . . . . . .4
2 The Commands 2 3 Options 7
  2.1 Options for \chordscheme . . 2 Index 9

1 License and Requirements

Permission is granted to copy, distribute and/or modify this software under the terms of the \LaTeX\ Project Public License (LPPL), version 1.3 or later (http://www.latex-project.org/lppl.txt). The software has the status “maintained.”

GUITARCHORDSCHEMES loads the packages TikZ [Tan13], etoolbox [Leh11] and pgfplots [Wri11]. It also loads the TikZ libraries shapes.msc, arrows and calc.
2 The Commands

This package more or less provides a single command:

\chordscheme\[⟨options⟩]\]
Typeset a guitar chord scheme.

\scales\[⟨option⟩]\]
Typeset a fingering scale.

These commands set the frame for the chord and scale tablatures and can be used to create sheets for manually writing down tablatures:

Similarly \scales creates a frame with two more frets:

2.1 Options for \chordscheme

The \{options\} argument is where the actual details for a chord happen. These are the available ones for \chordscheme:

\textbf{fret-number = \{number\}}

Default: 4

The number of frets that are drawn. This number must be at least 4. The option should be set as first option since it influences other options.
name = {⟨chordsymbol⟩}
Set the chord symbol. This option accepts a comma separated list of entries.

position = {⟨position⟩}
Set the position for the first of the four frets.

finger = ⟨fret⟩/⟨string⟩:⟨label⟩
Specify the finger positions for a chord. This option accepts a comma separated list of entries. The :⟨label⟩ is optional.

root = ⟨fret⟩/⟨string⟩:⟨label⟩
The same as finger but uses a square instead of a circle to indicate that this finger is playing the root of the chord. This option accepts a comma separated list of entries. The :⟨label⟩ is optional.

show-root = ⟨fret⟩/⟨string⟩
Specify positions of the root that are not part of the actual chord but are somewhere in the vicinity of it on the guitar neck. This option accepts a comma separated list of entries.

barre = ⟨fret⟩/⟨string range⟩:⟨label⟩
Specify a barré position for a chord. The ⟨string range⟩ part must contain a two string numbers separated with a dash. This option accepts a list of entries. The :⟨label⟩ is optional.

ring = {⟨string⟩}
Specify open strings. This option accepts a comma separated list of entries.

mute = {⟨string⟩}
Specify muted/un-played strings. This option accepts a comma separated list of entries.

Let’s take a look at a few examples:

```
\chordscheme{
  name = G ,
  position = I ,
  finger = {2/5:1} ,
  root = {3/6:2, 3/1:4} ,
  ring = {2,3,4}
}
```

Or a more “jazzy” chord:
2 The Commands

\[ \text{chordscheme} \]

\begin{verbatim}
  \begin{align*}
  \text{name} & = \text{G}^{6}, \\
  \text{position} & = \text{II}, \\
  \text{finger} & = \{1/4:1, 3/3:4, 2/2:3\}, \\
  \text{root} & = 2/6:2, \\
  \text{show-root} & = 4/4, \\
  \text{mute} & = \{1,5\}
  \end{align*}
\end{verbatim}

One with a barré:

\[ \text{chordscheme} \]

\begin{verbatim}
  \begin{align*}
  \text{name} & = \text{Gmi}^{7}, \\
  \text{position} & = \text{II}, \\
  \text{barre} & = 2/2-4:3, \\
  \text{show-root} & = 4/4, \\
  \text{root} & = 2/6:2, \\
  \text{mute} & = \{1,5\}
  \end{align*}
\end{verbatim}

2.2 Options for \texttt{\textbackslash scales}

The \texttt{\textbackslash options} argument for \texttt{\textbackslash scales} are similar to the ones for \texttt{\textbackslash chordscheme}:

\texttt{fret-number} = \{\texttt{\textbackslash number}\}\quad \text{Default: 6}

The number of frets that are drawn. This number must be at least 6. The option should be set as first option since it influences other options.

\texttt{name} = \{\texttt{\textbackslash title}\}

Set a title for the scale.

\texttt{position} = \{\texttt{\textbackslash position}\}

Set the position for the first of the six frets.

\texttt{finger} = \{\texttt{\textbackslash fret}/\texttt{\textbackslash string}:\texttt{\textbackslash label}\}

Specify the finger positions for the scale. This option accepts a comma separated list of entries. The :\texttt{\textbackslash label} is optional.

\texttt{root} = \{\texttt{\textbackslash fret}/\texttt{\textbackslash string}:\texttt{\textbackslash label}\}

The same as finger but uses a square instead of a circle to indicate that this finger is playing the
root of the scale. This option accepts a comma separated list of entries. The \{\langle label\rangle\} is optional.

\textbf{fret number} = \{(\langle integer\rangle)\}  \hspace{1cm} \text{Default: 6}

The number of frets displayed for a scale. The minimum number is 6.

\textbf{fingering} = type 1|type 1A|type 2|type 3|type 4

Set a whole predefined fingering. The types correspond to ones taught in \textit{Leavitt’s A Modern Method for Guitar} [Lea66]. This option assumes an ionic scale a places the roots correspondingly.

\textbf{fingering*} = type 1|type 1A|type 2|type 3|type 4

The same as \texttt{fingering} but not scale is assumed and no roots are indicated.

\textbf{fingering?} = type 1|type 1A|type 2|type 3|type 4

The same as \texttt{fingering*} but also no labels for the fingers are given.

Let’s see an example:

```
\scales[
    name = F-major (Fingering Type-1A) ,
    position = I ,
    fingering = type 1A
]
```

F-major (Fingering Type 1A)

An example for \texttt{fingering*}:

```
\scales[
    name = Fingering Type-3 ,
    fingering* = type 3
]
```
Now an example for `fingering?`:

```
\scales[
  name = Fingering Type-2 ,
  fingering? = type 2
]
```

At last an example for an explicitly set scale:

```
\scales[
  finger = {
    2/1:1, 5/1:4,
    2/2:1, 5/2:4,
    2/3:1, 4/3:3, 5/3:4,
    2/4:1, 4/4:3,
    2/5:1, 3/5:2, 4/5:3,
    2/6:1, 5/6:4
  }
]
```
3 Options

There are quite a number of options determining the layout of the tablatures. They can either be set as package options or via the setup command:

\setchordscheme
  options The setup command for GUITARCHORDSCHEMES.

Below every option and its corresponding default setting is described.

\texttt{x-unit} = \langle \texttt{dim} \rangle
  The basic $x$ unit for the Ti\kZ picture the chord scheme is set in.

\texttt{y-unit} = \langle \texttt{dim} \rangle
  The basic $y$ unit for the Ti\kZ picture the chord scheme is set in.

\texttt{finger-format} = \langle \texttt{TEX code} \rangle
  The format the numbers for the fingers are typeset with.

\texttt{finger-format+} = \langle \texttt{TEX code} \rangle
  Code to be appended to \texttt{finger-format}.

\texttt{position-format} = \langle \texttt{TEX code} \rangle
  The format the number for the position is typeset with.

\texttt{position-format+} = \langle \texttt{TEX code} \rangle
  Code to be appended to \texttt{position-format}.

\texttt{name-format} = \langle \texttt{TEX code} \rangle
  The format the chord name/symbol is typeset with.

\texttt{name-format+} = \langle \texttt{TEX code} \rangle
  Code to be appended to \texttt{name-format}.

\texttt{chord-name-format} = \langle \texttt{cs} \rangle
  The command that is used to parse the chord name. \langle \texttt{cs} \rangle needs to be a command that takes a mandatory argument.
3 Options

scales-name-format = \{\langle cs \rangle \}

The command that is used to parse the scales name. \langle cs \rangle needs to be a command that takes a mandatory argument.

Default: \@firstofone

Introduced in version 0.5

string-name-format = \{\langle \text{\LaTeX} code \rangle \}

The format the names of the strings are typeset with.

Default: \sffamily\small

string-name-format+ = \{\langle \text{\LaTeX} code \rangle \}

Code to be appended to string-name-format.

(initially empty)

Introduced in version 0.6

chord-frets = \{\langle number \rangle \}

The default number of frets of a chord scheme. \langle number \rangle must be at least 4.

Default: 4

Introduced in version 0.6

scales-frets = \{\langle number \rangle \}

The default number of frets of a scales scheme. \langle number \rangle must be at least 6.

Default: 6

line-width = \{\langle dim \rangle \}

The line width used for all lines drawn in the chord scheme.

Default: 1pt

finger-radius = \{\langle num \rangle \}

The radius of the circles that represent the fingers in multiples of x-unit. Also determines the size of the root markers and the barré.

Default: .1875

finger-x-offset = \{\langle num \rangle \}

The \textit{x} offset of the number with respect to the circle in multiples of x-unit.

Default: .375

finger-y-offset = \{\langle num \rangle \}

The \textit{y} offset of the number with respect to the circle in multiples of y-unit.

Default: .375

finger-style = \{\langle TikZ style \rangle \}

The \textsc{tikz} style the circles representing the fingers are drawn with. This is equivalent to \texttt{\textbackslash tikzset{finger style/.style={\langle TikZ style \rangle}}.}

Default: fill

root-style = \{\langle TikZ style \rangle \}

The \textsc{tikz} style the squares representing the roots are drawn with. This is equivalent to \texttt{\textbackslash tikzset{root style/.style={\langle TikZ style \rangle}}.}

Default: fill

show-root-style = \{\langle TikZ style \rangle \}

The \textsc{tikz} style the squares representing the “ghost roots” are drawn with. This is equivalent to \texttt{\textbackslash tikzset{show root style/.style={\langle TikZ style \rangle}}.}

Default: draw

ringing-style = \{\langle TikZ style \rangle \}

The \textsc{tikz} style the circles representing the open string markers are drawn with. This is equivalent to \texttt{\textbackslash tikzset{ringing style/.style={\langle TikZ style \rangle}}.}

Default: draw

muted-style = \{\langle TikZ style \rangle \}

The \textsc{tikz} style the nodes representing muted strings are drawn with. This is equivalent to \texttt{\textbackslash tikzset{muted style/.style={\langle TikZ style \rangle}}.}

Default: cross out, draw
tuning = \{(comma separated list of string names)\}  
Default: E, B, G, D, A, E

The tuning.

References

url: http://mirror.ctan.org/macros/latex/contrib/etoolbox/.
url: http://mirror.ctan.org/graphics/pgf/.
url: http://mirror.ctan.org/macros/latex/contrib/pgfopts/.

Index

A
A Modern Method for Guitar .......................... 5
B
barre ........................................ 3
C
chord-frets ................................... 8
chord-name-format ............... 7
\chordscheme ......................... 2 ff.
E
etoolbox (package) ............. 1
F
finger .................................... 3 ff.
finger-format .................. 7
finger-format+ ............... 7
finger-radius ................. 8
finger-style .................... 8
finger-x-offset ............... 8
finger-y-offset ............... 8
fingerer ......................... 5
fingerer+ ..................... 5
fingerer? ....................... 5 ff.

fret number ........................... 5

fret-number ....................... 2, 4
root .................................. 3 ff.
root-style ......................... 8

L
Leavitt, William .................. 5
Lehman, Philipp .................. 1
line-width ....................... 8
LPPL .................................. 1
M
mute .................................. 3
muted-style ..................... 8
N
name .................................. 3 ff.
name-format .................... 7
name-format+ ................. 7
P
pgfopts (package) ........ 1

position ................................ 3 ff.
position-format .......... 3 ff.

position-format+ .......... 7
position-format+ ........ 7

r
ring .................................. 3
ringing-style ................. 8
S
scales ......................... 2, 4 ff.
scales-frets .................... 8
scales-name-format .......... 8

\setchordscheme ............... 7
show-root ....................... 3
show-root-style .............. 8
string-name-format .......... 8
string-name-format+ .......... 8
T
Tantau, Till ..................... 1
TikZ/pgf (package) ........ 1
W
Wright, Joseph .................. 1
X
x-unit .......................... 7 ff.
Y
y-unit .......................... 7 ff.