

## Tobias Weh

mail@tobiw.de

http://tobiw.de/en

http://github.com/tweh/menukeys http://www.ctan.org/pkg/menukeys macros/latex/contrib/menukeys

2016/08/08 - v1.5

## Abstract

This package is build to format menu sequences, paths and keystrokes.

You're welcome to send me feedback, questions, bug reports and feature requests. If you like to support this package – especially improving or proof-reading the manual – send me an e-mail, please.

Many thanks to Ahmed Musa, who provided the list parsing code at http: //tex.stackexchange.com/a/44989/4918.

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## 1 Introduction

The menukeys package is mainly designed to parse and print sequences of software menus, folders and files or keystrokes. The most predefined styles use the power of  $TikZ^1$  to format the output.

For example if you want to tell the reader of a manual how to set the ruler unit you may type

To set the unit of the rulers go to  $\mbox{menu}{Extras} > \mbox{Settings} > \mbox{Rulers} \mbox{and choose between millimeters, inches and pixels. The shortcut to view the rulers is <math>\mbox{keys}{cmd} + \mbox{R}$ . Pressing these keys again will hide the rulers.

The standard path for saving your document is \directory{Macintosh HD/Users/Your Name/Documents} but you can change it at \menu{Extras > Settings > Saving} by clicking \menu{Change save path}.

and get this:

To set the unit of the rulers go to Extras Settings Rulers and choose between millimeters, inches and pixels. The shortcut to view the rulers is cmd + R. Pressing these keys again will hide the rulers.

The standard path for saving your document is Macintosh HD • Users • Your Name • Documents but you can change it at <a href="Extras">Extras</a> Settings Saving by clicking Change save path.

The package is loaded as usual via

\usepackage{menukeys}

## 2 Installation

To install menukeys manually run

```
latex menukeys.ins
```

and copy menukeys.sty to a path where LATEX can find it.

To typeset this manual run

```
pdflatex menukeys.dtx
makeindex -s gglo.ist -o menukeys.gls menukeys.glo
makeindex -s gind.ist -o menukeys.ind menukeys.idx
pdflatex menukeys.dtx
pdflatex menukeys.dtx
```

See http://www.ctan.org/pkg/pgf.

## 3 Package loading and options

Since menukeys uses catoptions, which does some heavy changes on key-value options, it is recommended to load menukeys as the last package (even after hyperref<sup>2</sup>)!

These are the possible options:

definemenumacros: Most of menukeys' macros should not conflict with other packages<sup>3</sup> but the predefined menu macros should be short and easy-to-read commands, which means that \menu{A,B,C} is preferred against \printmenusequence{A,B,C}. For that it's not unlikely that they conflict with other packages. To prevent this you can tell menukeys to not define them by calling the option definemenumacros=false. The default value is true.

If you do so you have to define your own menu macros, see section 4.4 for details.

definekeys (opt.) definekeys: Equal to definemenumacros for the key macros. The default value is true.

mackeys (opt.) mackeys: This option allows you to decide whether the mac keys are shown as text (mackeys=text) or symbols (mackeys=symbols). The default value is symbols.

os (opt.) os: You can specify the OS by saying os=mac or os=win. This will cause some key macros to be rendered differently. The default value is mac.

hyperrefcolorlinks (opt.) hyperrefcolorlinks: Use this if you want hyperref's colored links, since you can't use the hyperref option colorlinks directly (see sec. 5 and 6.4.1).

## 4 Usage

### 4.1 Basics

\menu \directory \keys

definemenumacros (opt.)

menukeys comes with three "menu macros" that parse and print lists. We have  $\mbox{\mbox{menu}{\langle menu \ sequence \rangle}}$ , with > as default input list separator,  $\mbox{\mbox{\mbox{directory}{\langle path \ and \ files \rangle}}}$  with / as default separator and  $\mbox{\mbox{\mbox{keys}{\langle keystrokes \rangle}}}$  with + as default separator. You've seen examples for all of them in section 1.

These macros have also an optional argument to set the input list separator. E.g. if you want to put in your menus with , instead of > you can say  $\mbox{\mbox{\mbox{menu}[,]}} {\langle menu \ sequence \rangle}.^4$ 

The possible input separators are /, =, \*, +, ,, ;, :, -, >, < and bslash (to use \ as separator). You can hide a separator from the parser by putting a

See http://tex.stackexchange.com/q/ 237683/4918 and https://github.com/ tweh/menukeys/issues/41.

<sup>&</sup>lt;sup>3</sup> If you find a conflict send an e-mail.

<sup>4</sup> If you want to change the input separator globally it's recommended to renew the menu macro as described in section 4.4.

part of the sequence in braces. Spaces around the separator will be ignored, i.e. \keys{\ctrl + C}.

**Example** \menu[,]{Extras,Settings,{Units, rulers and origin}} gives Extras Settings Units, rulers and origin

## 4.2 Styles

menukeys defines several "styles" that determine the output format of a menu macro. There are some predefined styles and others can be created by the user.

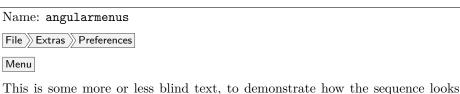
## 4.2.1 Predefined styles



This is some more or less blind text, to demonstrate how the sequence looks in text. This File Extras Preferences is the result of a style which name is menus. And again some blind text without any sense.



This is some more or less blind text, to demonstrate how the sequence looks in text. This File Extras Preferences is the result of a style which name is roundedmenus. And again some blind text without any sense.



This is some more or less blind text, to demonstrate how the sequence looks in text. This File Extras Preferences is the result of a style which name is angularmenus. And again some blind text without any sense.

Name: roundedkeys

S

This is some more or less blind text, to demonstrate how the sequence looks in text. This  $\boxed{Ctrl} + \boxed{Alt} + \boxed{Q}$  is the result of a style which name is roundedkeys. And again some blind text without any sense.

The color of + is taken from optional color B.

Name: shadowedroundedkeys

$$[Ctrl] + [Alt] + [Q]$$

S

This is some more or less blind text, to demonstrate how the sequence looks in text. This  $\boxed{\mathsf{Ctrl}} + \boxed{\mathsf{Alt}} + \boxed{\mathsf{Q}}$  is the result of a style which name is shadowedroundedkeys. And again some blind text without any sense.

The color of + is taken from optional color B. The shadow color is taken from optional color C.

Name: angularkeys

S

This is some more or less blind text, to demonstrate how the sequence looks in text. This  $\boxed{Ctrl} + \boxed{Alt} + \boxed{Q}$  is the result of a style which name is angularkeys. And again some blind text without any sense.

The color of + is taken from optional color B.

Name: shadowedangularkeys

S

This is some more or less blind text, to demonstrate how the sequence looks in text. This  $\boxed{\mathsf{Ctrl}} + \boxed{\mathsf{Alt}} + \boxed{\mathsf{Q}}$  is the result of a style which name is shadowedangularkeys. And again some blind text without any sense.

The color of + is taken from optional color B. The shadow color is taken from optional color C. Name: typewriterkeys

 $\bigcirc$  +  $\bigcirc$ 



This is some more or less blind text, to demonstrate how the sequence looks in text. This + © is the result of a style which name is typewriterkeys. And again some blind text without any sense.

The color of + is taken from optional color B.

Name: paths

C:→User→Folder→MyFile.tex

MyFile.tex

This is some more or less blind text, to demonstrate how the sequence looks in text. This C: \*User \* Folder \* MyFile.tex\* is the result of a style which name is paths. And again some blind text without any sense.

The sep color is taken from optional color C.

Name: pathswithfolder

☐ C: → User → Folder → MyFile.tex

This is some more or less blind text, to demonstrate how the sequence looks in text. This  $\bigcirc C: \texttt{`User`Folder`MyFile.tex}$  is the result of a style which name is pathswithfolder. And again some blind text without any sense.

The folder draw color is taken from optional color B.

 $The \ folder \ fill \ color \ is \ taken \ from \ optional \ color \ A.$ 

The sep color is taken from optional color C.

Name: pathswithblackfolder

C: → User → Folder → MyFile.tex

■ MyFile.tex

This is some more or less blind text, to demonstrate how the sequence looks in text. This **C:** \*User\*Folder\*MyFile.tex is the result of a style which name is pathswithblackfolder. And again some blind text without any sense.

The folder draw color is taken from optional color B.

The folder fill color is taken from optional color C.

The sep color is taken from optional color C.

The following three styles allow paths elements to be hyphenated, but they insert only a line break without a hyphen dash. Note that they only work with T1 and

OT1 encoding (at least I tested only these ones) and that this in some cases doesn't work very well.

Name: hyphenatepaths

C: Database Duser ALongUserNameHere ALongerFolderNameAtThisPlace PMyFile.tex

MyFile.tex

This is some more or less blind text, to demonstrate how the sequence looks in text. This C: Database Dser ALongUserNameHere ALongerFold erNameAtThisPlace MyFile.tex is the result of a style which name is hyphen atepaths. And again some blind text without any sense.

The sep color is taken from optional color C.

Name: hyphenatepathswithfolder

☐ C: Database > User > ALongUserNameHere > ALongerFolderNameAtThis Place > MyFile.tex

⊕MyFile.tex

This is some more or less blind text, to demonstrate how the sequence looks in text. This  $\ \, : \$ 

The folder draw color is taken from optional color B.

The folder fill color is taken from optional color A.

The sep color is taken from optional color C.

Name: hyphenatepathswithblackfolder

■ MyFile.tex

This is some more or less blind text, to demonstrate how the sequence looks in text. This  $\mathbf{c}: \mathbf{Database} \cdot \mathbf{User} \cdot \mathbf{ALongUserNameHere} \cdot \mathbf{ALongerFolder}$  NameAtThisPlace \cdot MyFile.tex is the result of a style which name is hyphen atepathswithblackfolder. And again some blind text without any sense.

The folder draw color is taken from optional color B.

The folder fill color is taken from optional color C.

The sep color is taken from optional color C.

\drawtikzfolder

**Hint** The folder is drawn with the command \drawtikzfolder which is part of menukeys and has two optional arguments to change the color of the lines and the fill color of the front:

 $\drawtikzfolder[\langle front fill \rangle][\langle draw \rangle]$ 

## 4.2.2 Declaring styles

\newmenustylesimple

The simplest way to define a new style is to use \newmenustylesimple. It has six arguments: \newmenustylesimple\(\dagger\*)\{\langle name\}\[\langle pre\]\[\langle style\rangle \]\[\langle style\rangle style\rangle \]\[\langle style\rangle \]\[\langle style\rangle \]\[\langle style\ran

**name** is the name of the new style. It must follow the specifications of TeX control sequences, which means it must contain only letters and no numbers.

**pre** is the code which is executed before a menu macro.

**style** is the style for the first list element. It has to be a TikZ-style which is applied to a node, e.g. draw, blue.

**sep** is the code executed between the lists elements, e.g. some space or a symbol.

**post** is the code which is executed after a menu macro.

theme is a color theme (see section 4.3).

**Example** Let us consider we want a list that prints a frame around its elements and separates them by a star. We can use

\newmenustylesimple{mystyle}{draw}[\$\ast\$]{mycolors}

\newmenustyle

The more advanced command is \newmenustyle. It has nine arguments: \newmenustyle\(\displies\) \{\langle\} \[\langle\] \[\langle\] \{\langle\} \[\langle\] \{\langle\} \[\langle\] \[\lang

**name** is the name of the new style. It must follow the specifications of TEX control sequences, which means it must contain only letters and no numbers.

**pre** is the code which is executed before a menu macro.

first is the style for the first list element. It has to be a TikZ-style which is applied to a node, e.g. draw, blue.

sep is the code executed between the lists elements, e.g. some space or a symbol.

mid is the style for all elements between the first and the last one. It has to be a TikZ sytle.

last is the style for the last list element. It has to be a TikZ sytle.

**single** this style is used if the list contains only one element. It has to be a TikZ sytle.

**post** is the code which is executed after a menu macro.

theme is a color theme (see section 4.3).

**Example** We can extend the previous example and desire that the first and the last element became red, and a single element should have a dashed frame. Furthermore the menu sequence should be preceded and followed by a bullet point:

```
\newmenustyle{mystyle}[$\bullet$]{draw,red}[$\ast$]%
{draw}{draw,red}{draw,dashed}[$\bullet$]
```

\CurrentMenuElement

If the TikZ node system doesn't fit your needs there are the **starred versions**: Use them and the arguments  $\langle first \rangle$ ,  $\langle mid \rangle$ ,  $\langle last \rangle$ ,  $\langle single \rangle$  can be any LaTeX code. To access the current list element use \CurrentMenuElement.

**Example** consider that we want all menu elements simple be fat and not drawn with a TikZ node. The separator should be the star again:

\newmenustylesimple\*{mystyle}{\textbf{\CurrentMenuElement}}[\$\ast\$]

\usemenucolor

If you want to make your own style you must take care of using the color theme. To access a color of the currently applied theme while defining a style use  $\usemenucolor{\langle element \rangle}$  (See section 4.3 for details about possible elements).

### 4.2.3 Copying styles

\copymenustyle

To copy an existing style to a new style use \copymenustyle  $\{\langle copy \rangle\} \{\langle original \rangle\}$ .

**Example** To copy the definition of mystyle to mycopy use

\copymenustyle{mycopy}{mystyle}

## 4.2.4 Changing styles

\changemenuelement

The simplest change we can imagine is to change a single element or the color theme of an existing style. For the first case there is  $\change menuelement \* \{\langle name \rangle\} \}$  { $\langle element \rangle$ } { $\langle element \rangle$ }, where the starred version works like the one of  $\new menustyle$  does.

**Example** To change the single element of mystyle from dashed to solid use the following code. You may save the original style by copying it as described above.

\changemenuelement{mystyle}{single}{draw}

\changemenucolortheme

To satisfy the second case use \changemenucolortheme  $\{\langle name \rangle\} \{\langle color theme \rangle\}$ .

**Example** To change the color theme of mystyle to myothercolors call

\changemenucolortheme{mystyle}{myothercolors}

\renewmenustylesimple \providemenustylesimple \renewmenustyle \providemenustyle The next level is redefining a style. This package provides the following macros the work like their LATEX-paragons and have the same arguments as the above described macros: \renewmenustylesimple, \providemenustylesimple, \renewmenustyle and \providemenustyle.

## 4.3 Color themes

To make the colors of a style become changeable without touching the style itself, menukeys uses "color themes". Every color theme must contain three color definitions that can be used to draw a node background, a node frame and a text color, and additionally two optional colors used by some themes.

### 4.3.1 Predefined themes

There	are	two	predefined	color	themes

Name: gray
Background: Border: Text: (A: B: C: )

Name: blacknwhite
Background: Border: Text: (A: B: C: )

#### 4.3.2 Create a theme

\newmenucolortheme

To create a new theme use \newmenucolortheme. It uses the following arguments: \newmenucolortheme{ $\langle name \rangle$ }{ $\langle model \rangle$ }{ $\langle br \rangle$ }{ $\langle txt \rangle$ }[ $\langle a \rangle$ ][ $\langle b \rangle$ ][ $\langle c \rangle$ ]

name is the name of the theme and must contain only letters.

model is the xcolor color model which is used to define a color, e.g. named, rgb, cmyk, ...

**bg** is the color definition for the node background.

**br** is the color definition for the node border.

txt is the color definition for the node's text.

**a** is an optional additional color (by default same as bg).

**b** is an optional additional color (by default same as br).

**c** is an optional additional color (by default same as txt).

**Example** To create a theme called mycolors we can say

\newmenucolortheme{mycolors}{named}{red}{green}{blue}

## 4.3.3 Copy a theme

\copymenucolortheme

To copy the definitions of one theme to another, use \copymenucolortheme  $\{\langle copy \rangle\} \{\langle original \rangle\}$ .

**Example** To copy the colors of mycolors to copycolors type

\copymenucolortheme{copycolors}{mycolors}

## 4.3.4 Change a theme

\changemenucolor

If you want to change the color of a theme's element use  $\color{\langle name \rangle}$   ${\langle element \rangle}$   ${\langle model \rangle}$   ${\langle color \ definition \rangle}$ , where name is the theme's name and  ${\langle element \rangle}$  is bg, br, or txt.

**Example** Let's change the text color of mycolors:

\changemenucolor{mycolors}{txt}{named}{gray}

\renewmenucolortheme

To redefine a complete theme use \renewmenucolortheme. It works with the same arguments as \newmenucolortheme.

### 4.4 Menu macros

The "menu marcos" take a list separated by a special symbol to print it with a menu style.

### 4.4.1 Predefined menu macros

See section 4.1.

### 4.4.2 Defining or changing menu macros

\newmenumacro

To define a new menu macro call  $\newmenumacro{\langle macro \rangle} [\langle input sep \rangle] {\langle style \rangle}.$ 

**name** is a LATEX control sequence name.

**input sep** is the default separator used in the input list (see section 4.1 for a list of valid separators).

If you don't give it the package's default (,) is used.

**style** is a menu style.

This wil give you a macro like  $\langle macro \rangle [\langle input \ sep \rangle] \{\langle list \rangle\}$ 

**Example** Assuming you need a command to format Windows paths, you can define it with

\newmenumacro{\winpath}[bslash]{mystyle}

and then use it as e.g. \winpath{C:\System\Deep\Deeper\YourFile.txt}. Note that mystyle must be defined before you call \newmenumacro.

\providemenumacro \renewmenumacro

There are also the two commands \providemenumacro and \renewnenumacro which take the same arguments as \newnenumacro and work like the IATEX macros \renewcommand and \providecommand.

**Example** To change the default input separator of \menu you must know the default style (which is menus) and then you can say

\renewmenumacro{\menu}[,]{menus}

## 4.5 Keys

The menukeys package comes with some macros to print special keys in the sequences set with \keys. Depending on the given OS (see section 3) some macros behave differently to be able to use a key even if it's undefined via the os option macros like  $\langle key \rangle$ mac and  $\langle key \rangle$ win that will always give the right symbol.

The full ist of key macros is shown in table 1.

Table 1: Overview of all key macros.

Macro	Mac	Win.	Macro
\shift	①	Û	\winmen
\capslock	曾	$\hat{\mathbb{U}}$	\backsp
\tab	<b>→</b>	$\stackrel{\longleftarrow}{\longrightarrow}$	\del
\esc	$\operatorname{esc} / \operatorname{v}$	Esc	\backde
\oldesc	$\operatorname{esc} / \operatorname{\emptyset}$	Esc	\arrowk
\ctrl	$\operatorname{ctrl}$	Ctrl	\arrowk
\Alt	alt / $\sim$	Alt	\arrowk
\AltGr		$\operatorname{Alt}\operatorname{Gr}$	\arrowk
\cmd	cmd / $\mathbb{H}$		\arrowk
\Space	$[\mathrm{empty}\ \mathrm{sp.}]$	[empty sp.]	\arrowk
\SPACE	Space	Space	\arrowk
\return	$\leftarrow$	4	\arrowk
\enter	~	Enter	

Macro	Mac	Win.
\winmenu		
\backspace	$\leftarrow$	$\leftarrow$
\del	Del. / $\boxtimes$	Del.
\backdel	Del. / $ otin $	Del.
\arrowkey{^}	$\uparrow$	$\uparrow$
\arrowkeyup	$\uparrow$	$\uparrow$
\arrowkey{v}	$\downarrow$	$\downarrow$
\arrowkeydown	$\downarrow$	$\downarrow$
\arrowkey{>}	$\rightarrow$	$\rightarrow$
\arrowkeyright	$\rightarrow$	$\rightarrow$
\arrowkey{<}	$\leftarrow$	$\leftarrow$
\arrowkeyleft	$\leftarrow$	$\leftarrow$

\arrowkey

The macro  $\arrowkey{(direction)}$  is a little special since it takes the direction as a singe character  $\hat{\ }$ , v (lower case v), > or <.

\ctrlname \delname \spacename mackeys (opt.) The texts for \ctrl, \del and \SPACE are saved in \ctrlname, \delname, \spacename respectively. So you can change them with \renewcommand.

The rendering of some Mac macros depend on the option mackeys The different versions are shown in the table (left: text, right: symbols).

I apologize that there are no commands for the windows key and the apple logo, but that would be a copyright infringement.

## 5 Known issues and bugs

- If you use the inputenc package menukeys must be loaded after it. Otherwise some key macros get corrupted.
- menukeys must be loaded after xcolor, if you load the latter with options. Otherwise you'll get an option clash Since menukeys loads xcolor internally you may pass options as global options via \documentclass.

**Example** Set xcolor to cmyk model:

```
\documentclass[cmyk]{article}
\usepackage{menukeys}
\begin{document}
    Hello World!
\end{document}
```

• Using hyperref with the colorlinks options causes an option clash. If you want colored links please load hyperref without this option and load menukeys with hyperrefcolorlinks.

If you find something to add to this list please send me an e-mail or report a bug on GitHub (https://github.com/tweh/menukeys).

## 6 Implementation

## 6.1 Required packages

Load the required packages

- 1 \RequirePackage{xparse}
- 2 \RequirePackage{xstring}
- 3 \RequirePackage{etoolbox}

Furthermore we need TikZ and some of its libraries,

- 5 \usetikzlibrary{calc,shapes.symbols,shadows}

the color package xcolor and adjustbox for the typewriterkeys style.

- 6 \RequirePackage{xcolor}
- 7 \RequirePackage{adjustbox}

Load relsize to be able to change the font size relative to the surrounding text.

8 \RequirePackage{relsize}

To define the list parsing commands and allow \ as a separator we load catoptions

9 \RequirePackage{catoptions}[2011/12/07]

## 6.2 Helper macros

43 }

```
Define macros to call \PackageError and warnings
         \tw@mk@error
       \tw@mk@warning
                        10 \newcommand*{\tw@mk@error}[2][Please consult the manual for more information.]{%
\tw@mk@warning@noline
                              \PackageError{menukeys}{#2}{#1}%
                        12 }
                        13 \newcommand*{\tw@mk@warning}[1]{%
                        14
                              \PackageWarning{menukeys}{#1}%
                        15 }
                        16 \newcommand*{\tw@mk@warning@noline}[1]{%
                              \PackageWarningNoLine{menukeys}{#1}%
                        17
                        18 }
         \tw@mk@tempa
                       Some commands for temporary use:
         \tw@mk@tempb
                        19 \def\tw@mk@tempa{}
                        20 \def\tw@mk@tempb{}
   \tw@mk@gobble@args
                       Define a command to gobble arguments.
                        21 \DeclareDocumentCommand{\tw@mk@gobble@args}{m}{%
                        22
                              \RenewDocumentCommand{\tw@mk@tempa}{#1}{}%
                              \tw@mk@tempa%
                        23
                        24 }
                              Options
                       6.3
                       First we declare and process the package options
                        25 \RequirePackage{kvoptions}
                        26 \SetupKeyvalOptions{
                             family=tw@mk,
                            prefix=tw@mk@
                        29 }
                        30 \DeclareBoolOption[true] {definemenumacros}
                        31 \DeclareBoolOption[true] {definekeys}
                        32 \DeclareBoolOption[false] {hyperrefcolorlinks}
                        33 \DeclareStringOption[mac]{os}
                        34 \DeclareStringOption[symbols] {mackeys}
                        35 \ProcessKeyvalOptions{tw@mk}\relax
                       Now we have to do some error treatment:
                        36 \IfSubStr{.mac.win.}{.\tw@mk@os.}{}{%
                              \tw@mk@error{Unknown value for option 'os'\MessageBreak
                        37
                              Possible values are 'mac' or 'win'.}%
                        38
                        39 }
                        40 \verb|\IfSubStr{.symbols.text.}{.} tw@mk@mackeys.}{}{%
                              \tw@mk@error{Unknown value for option 'mackeys'\MessageBreak
                        41
                              Possible values are 'symbols' or 'text'.}%
                        42
```

## 6.4 Workarounds

Some workarounds to "slove" some incompatibilities:

### 6.4.1 hyperref's colorlinks option

Since the colorlinks option of hyperref loads color (with some kind of \AtBeginDocument) it results in an option clas due to the changes made by catop tions. Thus one can't use colorlinks. Here we provide the code to activate colored links without the extra loading of color.

```
44 \iftw@mk@hyperrefcolorlinks
     \Hy@AtBeginDocument{% (hyperref.sty, line 4790)
         \def\@pdfborder{0 0 0}% (hyperref.sty, line 4806...)
         \let\@pdfborderstyle\@empty
47
48 %
          \ifHy@typexml% <----+
49 %
          \else%
                                        | This part
50 %
            \Hy@CatcodeWrapper{%
                                        | bust be
51 %
              \RequirePackage{color}%
                                        omitted
            }%
52 %
53 %
          \fi% <-----
         \def\Hy@colorlink#1{%
54
           \begingroup
55
           \HyColor@UseColor#1%
56
57
         }%
         \def\Hy@endcolorlink{\endgroup}%
58
         \Hy@Info{Link coloring ON}%
59
60
61 \fi
```

## 6.5 Color themes

### 6.5.1 Internal commands

\tw@make@color@theme

First we define an internal command to make a color theme

```
62 \newcommand*{\tw@make@color@theme}[8]{%
63 \definecolor{tw@color@theme@#1@bg}{#2}{#3}%
64 \definecolor{tw@color@theme@#1@br}{#2}{#4}%
65 \definecolor{tw@color@theme@#1@txt}{#2}{#5}%
66 \definecolor{tw@color@theme@#1@a}{#2}{#6}%
67 \definecolor{tw@color@theme@#1@b}{#2}{#7}%
68 \definecolor{tw@color@theme@#1@c}{#2}{#8}%
69}
```

## 6.5.2 User-level commands

\newmenucolortheme \renewmenucolortheme

After that we define the user-level commands:

```
}{%
                        73
                                 \tw@mk@error{Color theme '#1' already defined!\MessageBreak
                        74
                        75
                                 Use \string\renewmenucolortheme\space instead.}%
                              }
                        76
                        77 }
                        78 \mbox{ \normalf(renewmenucolortheme)} \mbox{ m m m m } 0{\#3} 0{\#4} 0{\#5} }{\%}
                              tw@make@color@theme{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
                        80 }
                       Lastly we define the changing and copying commands
     \changemenucolor
  \copymenucolortheme
                        81 \newcommand*{\changemenucolor}[4]{%
                              \IfSubStr{ bg br txt }{ #2 }{%
                                 \definecolor{tw@color@theme@#1@#2}{#3}{#4}%
                        83
                        84
                              }{%
                                 \tw@mk@error{No such color element ('#2')!\MessageBreak
                        85
                                 Possible values are bg, br and txt.}
                        86
                              }%
                        87
                        88 }
                        89 \newcommand*{\copymenucolortheme}[2]{%
                        90
                              \@ifundefinedcolor{tw@color@theme@#1@bg}{%
                        91
                                 \colorlet{tw@color@theme@#1@bg}{tw@color@theme@#2@bg}%
                                 \colorlet{tw@color@theme@#1@br}{tw@color@theme@#2@br}%
                        92
                                 \colorlet{tw@color@theme@#1@txt}{tw@color@theme@#2@txt}%
                        93
                                 \colorlet{tw@color@theme@#1@a}{tw@color@theme@#2@a}%
                        94
                                 \colorlet{tw@color@theme@#1@b}{tw@color@theme@#2@b}%
                        95
                                 \colorlet{tw@color@theme@#1@c}{tw@color@theme@#2@c}%
                        96
                        97
                                 \tw@mk@error{Color theme '#1' already defined!\MessageBreak
                        98
                                 Use \string\renewmenucolortheme\space instead.}
                        99
                              }
                        100
                        101 }
                        To be able to change the color theme of a style we must define this:
\changemenucolortheme
                        102 \newcommand{\changemenucolortheme}[2]{%
                        103
                              \ifcsundef{tw@style@#1@pre}{%
                                 \tw@mk@error{Style '#1' undefined!\MessageBreak
                        104
                        105
                                 Maybe you misspelled it?}%
                        106
                                 \@ifundefinedcolor{tw@color@theme@#2@bg}{%
                        107
                                    \tw@mk@error{Color theme '#2' is not defined!}%
                        108
                                 ጉና%
                        109
                                    \csdef{tw@style@#1@color@theme}{#2}%
                        110
                        111
                                 }%
                        112
                              }%
                        113 }
                       To use a color of a theme we define \usemenucolor as following.
        \usemenucolor
                        114 \newcommand{\usemenucolor}[1]{%
                        115
                              tw@color@theme@\tw@current@color@theme @#1%
                        116 }
```

### 6.5.3 Predefined themes

There are two predefined color themes

```
117 \newmenucolortheme{gray}{gray}{0.95}{0.3}{0}[0.95][0] [0] 118 \newmenucolortheme{blacknwhite}{gray}{1}{0}{0}[1][0]
```

## 6.6 Styles

The style generating commands will set some commands that are named like tw@style@(name)@(element).

\tw@default@sep
\tw@default@pre
\tw@default@post

Before we can define the internal declaring macro to use it later in the user level commands, we have to set some defaults for the optional arguments

```
119 \newcommand{\tw@default@sep}{%
120 \hspace{0.2em plus 0.1em minus 0.5em}%
121 }
122 \newcommand{\tw@default@pre}{}
123 \newcommand{\tw@default@post}{}
```

### 6.6.1 Internal commands

Now we can define the internal commands.

\tw@declare@style@simple

Our first step is to define the simple command.

```
124 \DeclareDocumentCommand{\tw@declare@style@simple}{%
125
      s m O{\tw@default@pre} m O{\tw@default@sep} O{\tw@default@post} m
126 }{%
127
      \csdef{tw@style@#2@color@theme}{#7}%
128
      \csdef{tw@style@#2@pre}{#3}%
      \csdef{tw@style@#2@sep}{#5}%
129
      \csdef{tw@style@#2@post}{#6}%
130
      \IfBooleanTF{#1}{%
131
         \csdef{tw@style@#2@single}{#4}%
132
         \csdef{tw@style@#2@first}{#4}%
133
134
         \csdef{tw@style@#2@mid}{#4}%
135
         \csdef{tw@style@#2@last}{#4}%
136
      }{%
         \csdef{tw@style@#2@single}{%
137
            \tikz[baseline=(tw@node.base)]{%
138
            \node(tw@node)[#4]{\strut\CurrentMenuElement};}}%
139
140
         \csdef{tw@style@#2@first}{%
            \tikz[baseline=(tw@node.base)]{%
141
            \node(tw@node)[#4]{\strut\CurrentMenuElement};}}%
142
         \csdef{tw@style@#2@mid}{%
143
            \tikz[baseline=(tw@node.base)]{%
144
            \node(tw@node)[#4]{\strut\CurrentMenuElement};}}%
145
146
         \csdef{tw@style@#2@last}{%
147
            \tikz[baseline=(tw@node.base)]{%
148
            \node(tw@node)[#4]{\strut\CurrentMenuElement};}}%
```

```
149 }%
150 }
```

\tw@declare@sytle \tw@declare@sytle@extra@args The next step is to create the extended command. This command must have ten arguments (including the star) so we have to define a helping macro to grab the last two macros.

```
151 \DeclareDocumentCommand{\tw@declare@sytle@extra@args}{%
      O{\tw@default@post} m
152
153 }{%
      \csdef{tw@style@\tw@current@style @post}{#1}%
154
      \csdef{tw@style@\tw@current@style @color@theme}{#2}%
155
156 }
Now we can define \tw@declare@style:
157 \DeclareDocumentCommand{\tw@declare@style}{%
158
      s m O{\tw@default@pre} m O{\tw@default@sep} m m m
159 }{%
      \def\tw@current@style{#2}
160
      \csdef{tw@style@#2@pre}{#3}%
161
      \csdef{tw@style@#2@sep}{#5}%
162
      \IfBooleanTF{#1}{%
163
         \csdef{tw@style@#2@single}{#8}%
164
         \csdef{tw@style@#2@first}{#4}%
165
         \csdef{tw@style@#2@mid}{#6}%
166
         \csdef{tw@style@#2@last}{#7}%
167
      }{%
168
169
         \csdef{tw@style@#2@single}{%
            \tikz[baseline=(tw@node.base)]{%
170
171
            \node(tw@node)[#8]{\strut\CurrentMenuElement};}}%
172
         \csdef{tw@style@#2@first}{%
            \tikz[baseline=(tw@node.base)]{%
173
            \node(tw@node)[#4]{\strut\CurrentMenuElement};}}%
174
         \csdef{tw@style@#2@mid}{%
175
            \tikz[baseline=(tw@node.base)]{%
176
            \node(tw@node)[#6]{\strut\CurrentMenuElement};}}%
177
         \csdef{tw@style@#2@last}{%
178
179
            \tikz[baseline=(tw@node.base)]{%
            \node(tw@node)[#7]{\strut\CurrentMenuElement};}}%
180
181
182
      \tw@declare@sytle@extra@args%
183 }
```

### 6.6.2 User-level commands

```
newmenustylesimple It's time to define the user-level commands now:
renewmenustylesimple 184 \NewDocumentCommand{\newmenustylesimple}{s m}{%
providemenustylesimple 185 \ifcsundef{tw@style@#2@pre}{%
newmenustyle 186 \IfBooleanTF{#1}{%
renewmenustyle 187 \tw@declare@style@simple*{#2}%
providemenustyle 188 }{%
```

```
\tw@declare@style@simple{#2}%
189
         }%
190
      }{%
191
         \tw@mk@error{Style '#2' already defined!\MessageBreak
192
         Use \string\renewmenustylesimple\space instead.}%
193
194
         \tw@mk@gobble@args{o m o o m}%
195
      }%
196 }
197 \NewDocumentCommand{\renewmenustylesimple}{s m}{%
      \IfBooleanTF{#1}{%
198
         \tw@declare@style@simple*{#2}%
199
      }{%
200
201
        \tw@declare@style@simple{#2}%
      }%
202
203 }
\ifcsundef{tw@style@#2@pre}{%
205
         \IfBooleanTF{#1}{%
206
207
            \tw@declare@style@simple*{#2}%
208
         }{%
            \tw@declare@style@simple{#2}%
209
         }%
210
      }{%
211
         \tw@mk@warning{Trying to provide style '#2' failed,\MessageBreak
212
         because it's already defined.\MessageBreak
213
214
         You may use \string\renewmenustylesimple\space instead.}%
         \tw@mk@gobble@args{o m o o m}%
215
      }%
216
217 }
218
219 \NewDocumentCommand{\newmenustyle}{s m}{%
220
      \ifcsundef{tw@style@#2@pre}{%
221
         \IfBooleanTF{#1}{%
            \tw@declare@style*{#2}%
222
223
         }{%
224
            \tw@declare@style{#2}%
         }%
225
      }{%
226
227
         \tw@mk@error{Style '#2' already defined!\MessageBreak
         Use \string\renewmenustyle\space instead.}%
228
229
         \tw@mk@gobble@args{o m o m m m o m}%
      }%
230
231 }
232 \NewDocumentCommand{\renewmenustyle}{s m}{%
233
      \IfBooleanTF{#1}{%
234
         \tw@declare@style*{#2}%
235
236
        \tw@declare@style{#2}%
237
      }%
238 }
```

```
239 \NewDocumentCommand{\providemenustyle}{s m}{%
      \ifcsundef{tw@style@#2@pre}{%
240
         \IfBooleanTF{#1}{%
241
            \tw@declare@style*{#2}%
242
         }{%
243
244
             <page-header>
245
         }%
      }{%
246
         \tw@mk@warning{Trying to provide style #2 failed,\MessageBreak
247
         because it's already defined.\MessageBreak
248
         You may use \string\renewmenustyle\space instead.}%
249
250
         \tw@mk@gobble@args{o m o m m m o m}%
      }%
251
252 }
6.6.3
       Copying and changing
The last two steps in this part are to define a command to copy styles
253 \newcommand*{\copymenustyle}[2]{%
254
      \ifcsundef{tw@style@#1@pre}{%
         \ifcsundef{tw@style@#2@pre}{%
255
            \tw@mk@error{Can't copy not existing style ('#2')!}%
256
         }{%
257
            \csletcs{tw@style@#1@pre}{tw@style@#2@pre}%
258
            \csletcs{tw@style@#1@post}{tw@style@#2@post}%
259
            \csletcs{tw@style@#1@sep}{tw@style@#2@sep}%
260
            \csletcs{tw@style@#1@single}{tw@style@#2@single}%
261
            \csletcs{tw@style@#1@first}{tw@style@#2@first}%
262
            \csletcs{tw@style@#1@mid}{tw@style@#2@mid}%
263
            \csletcs{tw@style@#1@last}{tw@style@#2@last}%
264
265
            \csletcs{tw@style@#1@color@theme}{tw@style@#2@color@theme}
266
         }%
267
      }{%
         \tw@mk@error{Style '#1' already exists!}%
268
      }%
269
270 }
and one to change a single element of a style.
271 \NewDocumentCommand{\changemenuelement}{s m m m}{%
272
      \ifcsundef{tw@style@#2@pre}{%
273
         \tw@mk@error{Style '#2' undefined.}%
274
275
         \IfSubStr{ single first middle last pre post sep }{ #3 }{%
            \IfBooleanTF{#1}{%
276
```

\copymenustyle

\changemenuelement

277

 $\frac{278}{279}$ 

280

281

\csdef{tw@style@#2@#3}{#4}%

}{%

\IfSubStr{ pre post sep }{ #3 }{%
 \csdef{tw@style@#2@#3}{#4}%

```
\csdef{tw@style@#2@#3}{%}
282
                   \tikz[baseline=(tw@node.base)]{%
283
                   \node(tw@node)[#4]{\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}}%
284
               }%
285
            }%
286
287
         }{\tw@mk@error{No element '#3'. Possible values are\MessageBreak
288
           single, first, middle, last, pre, post or sep.}}%
289
      }%
290 }
```

### 6.6.4 Predefined styles

We define several styles for menu sequences, paths and keystrokes.

tw@set@tikz@colors

First we define a TikZ-style to apply the color theme to a node easily

```
291 \tikzset{tw@set@tikz@colors/.style={%
292    draw=\usemenucolor{br},
293    fill=\usemenucolor{bg},
294    text=\usemenucolor{txt},
295 }}
```

Now we can define the styles. To keep the most settings of a style together we make additional TikZ-styles instead of setting everything directly to the nodes.

```
296 \tikzset{tw@menus@base/.style={%
      tw@set@tikz@colors,
297
      rounded corners=0.15ex,
298
      inner sep=Opt,
299
      inner xsep=2pt
300
301
      text height=1.825ex,
      text depth=0.7ex,
302
      minimum width=1.5em,
303
304
      font=\relsize{-1}\sffamily,
305
      signal,
306
      signal to=nowhere,
      signal pointer angle=110,
307
308 }}
309 \tw@declare@style*{menus}{%
      \text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]}{\%}
310
         \node(tw@node)[tw@menus@base,signal to=east]%
311
         {\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
312
313 [\hspace{-0.2em}\hspace{0em plus 0.1em minus 0.05em}]%
314 {%
      \text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]}{\%}
315
         \node(tw@node)[tw@menus@base,signal from=west,signal to=east]%
316
         {\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
317
318 }{%
      \text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]}{\%}
319
         \node(tw@node)[tw@menus@base,signal from=west,]%
320
321
         {\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
322 }{%
```

```
\text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]}{\%}
323
          \node(tw@node)[tw@menus@base]{\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
324
325 }{gray}
326
327 \tikzset{tw@roundedmenus@base/.style={%
328
      tw@set@tikz@colors,
329
      rounded corners=0.3ex,
330
      inner sep=0pt,
      inner xsep=2pt,
331
332
      text height=1.825ex,
333
      text depth=0.7ex,
334
      minimum width=1.5em,
      font=\relsize{-1}\sffamily,
336
      signal,
      signal to=nowhere,
337
      signal pointer angle=110,
338
339 }}
340 \tw@declare@style*{roundedmenus}{%
      \text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]}{\%}
341
342
         \node(tw@node)[tw@roundedmenus@base,signal to=east]%
         {\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
343
344 [\hspace{-0.2em}\hspace{0em plus 0.1em minus 0.05em}]%
345 {%
      \text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]{}% }
346
347
          \node(tw@node)[tw@roundedmenus@base,signal from=west,signal to=east]%
          {\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
348
349 }{%
      \text{tikz[baseline=}\{(\$(tw@node.base)+(0,-0.2ex)\$)\}]\{\%
350
          \node(tw@node)[tw@roundedmenus@base,signal from=west,]%
351
          {\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
352
353 }{%
354
      \text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]}{\%}
355
          \node(tw@node)[tw@roundedmenus@base]{\strut\color{\usemenucolor{txt}}\CurrentMenuElement
356 }{gray}
357
358 \tikzset{tw@angularmenus@base/.style={%
      tw@set@tikz@colors,
359
360
      inner sep=0pt,
      inner xsep=2pt,
361
      text height=1.825ex,
362
363
      text depth=0.7ex,
      minimum width=1.5em,
364
      font=\relsize{-1}\sffamily,
365
366
      signal,
367
      signal to=nowhere,
368
      signal pointer angle=110,
369 }}
370 \tw@declare@style*{angularmenus}{%
      \text{tikz}[\text{baseline}=\{(\$(\text{tw@node.base})+(0,-0.2\text{ex})\$)\}]\{\%
371
372
          \node(tw@node)[tw@angularmenus@base,signal to=east]%
```

```
{\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
374 [\hspace{-0.2em}\hspace{0em plus 0.1em minus 0.05em}]%
375 {%
376
      \text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]}{%}
         \node(tw@node)[tw@angularmenus@base,signal from=west,signal to=east]%
377
378
         {\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
379 }{%
      \text{tikz[baseline=}\{(\$(tw@node.base)+(0,-0.2ex)\$)\}]\{\%
380
         \node(tw@node)[tw@angularmenus@base,signal from=west,]%
381
         {\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
382
383 }{%
      \text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]}{%}
384
         \node(tw@node)[tw@angularmenus@base]{\strut\color{\usemenucolor{txt}}\CurrentMenuElement
385
386 }{gray}
387
388 \tikzset{tw@roundedkeys@base/.style={%
      tw@set@tikz@colors,
389
      rounded corners=0.3ex,
390
391
      inner sep=0pt,
392
      inner xsep=2pt,
393
      text height=1.825ex,
      text depth=0.7ex,
394
      minimum width=1.5em,
395
      font=\relsize{-1}\sffamily,
396
397 }}
398 \tw@declare@style@simple*{roundedkeys}{%
      \text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]}{\%}
399
         \node(tw@node)[tw@roundedkeys@base]%
400
            {\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
401
402 } [%
      \hspace{0.1em plus 0.1em minus 0.05em}%
403
404
      405
      \hspace{0.1em plus 0.1em minus 0.05em}%
406 ]{gray}
407
408 \tikzset{tw@shadowedroundedkeys@base/.style={%
      tw@set@tikz@colors,
409
410
      rounded corners=0.3ex,
      inner sep=0pt,
411
      inner xsep=2pt,
412
413
      text height=1.825ex,
      text depth=0.7ex,
414
      minimum width=1.5em,
415
      font=\relsize{-1}\sffamily,
416
417
      general shadow={%
418
         shadow xshift=.2ex, shadow yshift=-.15ex,
419
         fill=\usemenucolor{c},
420
      },
421 }}
422 \tw@declare@style@simple*{shadowedroundedkeys}{%
```

```
\text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]}{\%}
423
         \node(tw@node)[tw@shadowedroundedkeys@base]%
424
            {\strut\color{\usemenucolor{txt}}\CurrentMenuElement};%
425
      }%
426
427 } [%
428
      \hspace{0.2ex}\hspace{0.1em plus 0.1em minus 0.05em}%
429
      430
      \hspace{0.1em plus 0.1em minus 0.05em}%
431 ] [\hspace{0.2ex}] {gray}
432
433 \tikzset{tw@angularkeys@base/.style={%
434
      tw@set@tikz@colors,
      inner sep=0pt,
435
      inner xsep=2pt,
436
      text height=1.825ex,
437
      text depth=0.7ex,
438
      minimum width=1.5em,
439
      font=\relsize{-1}\sffamily,
440
441 }}
442 \tw@declare@style@simple*{angularkeys}{%
443
      \text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]{}% }
         \node(tw@node)[tw@angularkeys@base]%
444
            {\tt \{\color{\color{txt}\}\CurrentMenuElement};} \%
445
446 } [%
447
      \hspace{0.1em plus 0.1em minus 0.05em}%
      \textcolor{\usemenucolor{b}}{\raisebox{0.25ex}{\sffamily\relsize{-2}+}}%
448
      \hspace{0.1em plus 0.1em minus 0.05em}%
449
450 ]{gray}
451
452 \tikzset{tw@shadowedangularkeys@base/.style={%
      tw@set@tikz@colors,
453
454
      inner sep=0pt,
455
      inner xsep=2pt,
456
      text height=1.825ex,
      text depth=0.7ex,
457
      minimum width=1.5em,
458
      font=\relsize{-1}\sffamily,
459
460
      general shadow={%
461
         shadow xshift=.2ex, shadow yshift=-.15ex,
         fill=\usemenucolor{c},
462
463
      },
464 }}
465 \tw{Q} declare{\tt QstyleQsimple*{shadowedangularkeys}} {\tt \%}
      \text{tikz[baseline={($(tw@node.base)+(0,-0.2ex)$)}]{}% }
466
467
         \node(tw@node)[tw@shadowedangularkeys@base]%
468
            {\strut\color{\usemenucolor{txt}}\CurrentMenuElement};}%
469 } [%
470
      \hspace{0.2ex}\hspace{0.1em plus 0.1em minus 0.05em}%
471
      \textcolor{\usemenucolor{b}}{\raisebox{0.25ex}{\sffamily\relsize{-2}+}}%
472
      \hspace{0.1em plus 0.1em minus 0.05em}%
```

```
473 ] [\hspace{0.2ex}] {gray}
474
475 \tikzset{tw@typewriterkeys@base/.style={%
      tw@set@tikz@colors,
476
477
      shape=circle,
478
      minimum size=2ex,
479
      inner sep=0.5pt, outer sep=1pt,
480
      font=\ttfamily\relsize{-1},
481 }}
482 \verb|\twOdeclareOstyleOsimple*{typewriterkeys}{{\%}} \\
      \def\tw@typewriterkeys@curr@elem{%
483
         \maxsizebox*{2ex}{\CurrentMenuElement}%
484
485
      \begin{tikzpicture}[baseline={($(tw@node.south)+(0,0.8ex)$)}]%
486
         \node(tw@node)[%
487
            tw@typewriterkeys@base, inner sep=1.25pt, line width=0.6pt%
488
         ]{\color{\usemenucolor{txt}}\tw@typewriterkeys@curr@elem};
489
490
         \node[tw@typewriterkeys@base]%
491
            {\color{\usemenucolor{txt}}\tw@typewriterkeys@curr@elem};
492
      \end{tikzpicture}%
493 } [%
      \hspace{0.2ex}\hspace{0.1em plus 0.1em minus 0.05em}%
494
      495
      \hspace{0.1em plus 0.1em minus 0.05em}%
496
497 ] {blacknwhite}
499 \tw@declare@style@simple*{paths}{%
      {\ttfamily\color{\usemenucolor{txt}}\CurrentMenuElement}%
500
501 } [%
      \hspace{0.2em plus 0.1em}%
502
      \raisebox{0.08ex}{%
503
504
         \tikz{fill[\usemenucolor{c}] (0,0) -- (0.5ex,0.5ex)%}
505
                   -- (0,1ex) -- cycle;}%
506
      }%
      \hspace{0.2em plus 0.1em}%
507
508 ] {blacknwhite}
509
510 \newcounter{tw@hyphen@char@num}
511 \newif\if@tw@hyphenatepaths@warnig
512 \@tw@hyphenatepaths@warnigtrue
513 \tw@declare@style@simple*{hyphenatepaths}{%
      {\ttfamily
514
       \IfStrEq{T1}{\encodingdefault}{%
515
          \setcounter{tw@hyphen@char@num}{23}%
516
517
518
          \IfStrEq{OT1}{\encodingdefault}{%
519
             \setcounter{tw@hyphen@char@num}{255}%
520
          }{%
             \if@tw@hyphenatepaths@warnig%
521
             \tw@mk@warning{The hyphenatepaths styles will probably only\MessageBreak
522
```

```
work with T1 or OT1 encoding.}%
523
             \fi\global\@tw@hyphenatepaths@warnigfalse%
524
         }%
525
       }%
526
       \hyphenchar\font=\value{tw@hyphen@char@num}\relax
527
528
       \color{\usemenucolor{txt}}%
529
       \CurrentMenuElement}%
530 } [%
      \hspace{0.2em plus 0.1em}%
531
      \raisebox{0.08ex}{%
532
         \tilde{c} = (0,0) -- (0.5ex,0.5ex)
533
534
                   -- (0,1ex) -- cycle;}%
535
      \hspace{0.2em plus 0.1em}%
536
537 ]{blacknwhite}
538
   539
      \begin{tikzpicture}[rounded corners=0.02ex,scale=0.7]
540
541
         \draw [#2] (0,0) -- (1em,0) -- (1em,1.5ex) -- (0.5em,1.5ex) -- %
542
               (0.4em, 1.7ex) -- (0.1em, 1.7ex) -- (0, 1.5ex) -- cycle;
         \draw [#2,fill=#1] (0,0) -- (1em,0) -- (0.85em,1.15ex) -- %
543
               ++(-1em,0) -- cycle;
544
      \end{tikzpicture}%
545
546 }
547
548 \copymenustyle{pathswithfolder}{paths}
549 \changemenuelement{pathswithfolder}{pre}{%
550
      \drawtikzfolder[\usemenucolor{a}][\usemenucolor{b}]%
      \hspace{0.2em plus 0.1em}%
551
552 }
553
554 \searrow folder}{pathswithblackfolder}{paths}
555
   \changemenuelement{pathswithblackfolder}{pre}{%
556
      \drawtikzfolder[\usemenucolor{c}][\usemenucolor{b}]%
      \hspace{0.2em plus 0.1em}%
557
558 }
559
560 \searrow \{hyphenatepathswithfolder\}\{hyphenatepaths\}
   \changemenuelement{hyphenatepathswithfolder}{pre}{%
      \drawtikzfolder[\usemenucolor{a}][\usemenucolor{b}]%
562
563
      \hspace{0.2em plus 0.1em}%
564 }
565
566 \copymenustyle{hyphenatepathswithblackfolder}{hyphenatepaths}
567 \changemenuelement{hyphenatepathswithblackfolder}{pre}{%
      \drawtikzfolder[\usemenucolor{c}][\usemenucolor{b}]%
      \hspace{0.2em plus 0.1em}%
569
570 }
```

## 6.7 Menu macros

### 6.7.1 Internal commands

```
First we define our default input separator
\tw@default@input@sep
                       571 \edef\tw@default@input@sep{,}
  \CurrentMenuElement
                       and the \CurrentMenuElement dummy
                       572 \def\CurrentMenuElement{}
\tw@define@menu@macro
                       Then we set up the internal command to create new menu macros. The list parsing
                       code was essentially provided by Ahmed Musa at http://tex.stackexchange.
                       com/a/44989/4918. Thank you very much!
                       573 \begingroup
                       574 \lccode '\,=1
                       575 \lowercase{\endgroup
                            \robust@def*\tw@mk@test@input@sep#1{%
                              \xifinsetTF{,\cpttrimspaces{#1},}{,bslash,backslash,directory,location,}%
                       577
                            }%
                       578
                       579 }
                       580 \verb|\NewDocumentCommand{\tw@define@menu@macro}{\%}
                             m O{\tw@default@input@sep} m
                       581
                       582 }{%
                       583
                             \ifcsundef{tw@style@#3@sep}{%
                                \tw@mk@error{Can't define menu macro \string#1\space,\MessageBreak
                       584
                                because the style '#3' is not available!}
                       585
                       586
                                \csdef{tw@parse@menu@list@\expandafter\@gobble\string#1}##1{%
                       587
                                   \iflastindris
                       588
                                      \ifnum\indrisnr=\@ne
                       589
                                          \def\CurrentMenuElement{##1}%
                       590
                                          \@nameuse{tw@style@#3@single}%
                       591
                                      \else
                       592
                                           \def\CurrentMenuElement{##1}%
                       593
                                           \Onameuse{twOstyleO#3Osep}\Onameuse{twOstyleO#3Olast}%
                       594
                                      \fi
                       595
                       596
                                   \else
                                      \ifnum\indrisnr=\@ne
                       597
                                          \def\CurrentMenuElement{##1}%
                       598
                                          \@nameuse{tw@style@#3@first}%
                       599
                                      \else
                       600
                                          \def\CurrentMenuElement{##1}%
                       601
                                          \label{lem:condition} $$ \operatorname{tw@style@#3@sep}\ \end{tw@style@#3@mid}\% $$
                       602
                                      \fi
                       603
                                   \fi
                       604
                                }%
                       605
                                \expandafter\newcommand\csname\expandafter\@gobble\string#1\endcsname[2][#2]{%
                       606
                                   \leavevmode%
                       607
                       608
                                   609
                                   \Onameuse{twOstyleO#3Opre}%
```

```
\tw@mk@test@input@sep{##1}{%
610
               \edef\tw@menu@list{\detokenize{##2}}\edef\tw@mk@tempa{\@backslashchar}%
611
            }{%
612
                \edef\tw@menu@list{\unexpanded{##2}}\edef\tw@mk@tempa{\cpttrimspaces{##1}}%
613
            }%
614
            {\tt \{\tw@mk@tempb\}\{tw@parse@menu@list@\expandafter\egobble\string\#1\}\%}
615
616
            \cptexpanded{\indrisloop*[\tw@mk@tempa]}\tw@menu@list\tw@mk@tempb}%
            \@nameuse{tw@style@#3@post}}%
617
         }%
618
      }%
619
620 }
621 \edef\cpt@parserlist{\cpt@parserlist\@backslashchar}
```

#### 6.7.2 User-level commands

\newmenumacro \renewmenumacro \providemenumacro Now it's time to build the user-level commands

```
622 \NewDocumentCommand{\newmenumacro}{m O{\tw@default@input@sep} m}{%
      \ifcsundef{\expandafter\@gobble\string#1}{%
623
624
         \tw@define@menu@macro{#1}[#2]{#3}%
625
         \expandafter\cptrobustify\csname\expandafter\@gobble\string#1\endcsname
      }{
626
         \tw@mk@error{Menu macro '\string#1' already defined!\MessageBreak
627
         Use \string\renewmenustyle\space instead.}
628
      }%
629
630 }
631 \NewDocumentCommand{\renewmenumacro}{m O{\tw@default@input@sep} m}{%
      \cslet{\expandafter\@gobble\string#1}{\relax}%
632
      \tw@define@menu@macro{#1}[#2]{#3}%
633
634 }
635 \NewDocumentCommand{\providemenumacro}{m O{\tw@default@input@sep} m}{%
      \ifcsundef{\expandafter\@gobble\string#1}{%
636
637
         \tw@define@menu@macro{#1}[#2]{#3}%
638
      }{
         \tw@mk@warning{Menu macro '\string#1' already defined!\MessageBreak
639
         Use \string\renewmenustyle\space to redefine it.}
640
      }%
641
642 }
```

### 6.7.3 Predefined menu macros

Now we got all tools to predefine some menu macros. To be sure that these commands won't conflict with other packages we introduced the option definemacros. Here we have to check it:

```
643 \iftw@mk@definemenumacros
```

```
\menu And then we define three basic macros.

\directory 644 \newmenumacro{\menu}[>] \menus 645 \newmenumacro{\directory}[/] \paths 646 \newmenumacro{\keys}[+] \{roundedkeys}
```

Lastly we close the definemacros if statement: 647 \fi

## 6.8 Keys

Before we define anything we check if the user allows it:

```
648 \iftw@mk@definekeys
```

Before define the key macros we create some macros that save some typing by condensing the similarities between the key macros.

\tw@make@key@box

The first of these macros helps us building save boxes to store the {tikzpicture}, that will draw the key later. This is necessary because otherwise the picture will inherit the style of the key sequence node.

```
649 \NewDocumentCommand{\tw@make@key@box}{m m}{%
650 %
       \expandafter\newbox\csname tw@mk@box@#1\endcsname
651 %
       \expandafter\sbox\csname tw@mk@box@#1\endcsname{%
652 %
          #2%
653 %
       }%
      \csdef{tw0mk0#1}{%}
654
655 %
          \expandafter\usebox\csname tw@mk@box@#1\endcsname%
656
657
      }%
658 }
```

\tw@make@key@macro

The next macro defines the user level command by accessing a macro like  $tw@mk@\langle key\rangle$  or  $tw@mk@\langle key\rangle@\langle os\rangle$ , if the appearance differs between Mac and Windows. To use this macro we assume that the  $tw@mk@\langle key\rangle$  commands are defined.

```
659 \NewDocumentCommand{\tw@make@key@macro}{s m}{%
      \IfBooleanTF{#1}{%
660
661
         \expandafter\providecommand\csname\expandafter\@gobble\string#2\endcsname{%
             \expandonce{\maxsizebox{!}{1.8ex}{%
662
                \@nameuse{tw@mk@\expandafter\@gobble\string#2@\tw@mk@os}}%
663
            }%
664
         }%
665
         \expandafter\providecommand\csname\expandafter\@gobble\string#2mac\endcsname{%
666
667
            \expandonce{\maxsizebox{!}{1.8ex}{%
668
                \@nameuse{tw@mk@\expandafter\@gobble\string#2@mac}}%
            }%
669
670
         }%
         \expandafter\providecommand\csname\expandafter\@gobble\string#2win\endcsname{%
671
            \expandonce{\maxsizebox{!}{1.8ex}{%
672
                \Onameuse{twOmkO\expandafter\Ogobble\string#2Owin}}%
673
            }%
674
         }%
675
676
         \expandafter\providecommand\csname\expandafter\@gobble\string#2\endcsname{%
677
            \expandonce{\maxsizebox{!}{1.8ex}{%
678
                \@nameuse{tw@mk@\expandafter\@gobble\string#2}}%
679
```

```
680 }%
681 }%
682 }%
```

\tw@define@mackey

The last helping macro is \twQdefine@mackey. We use it to execute code depending on the mackeys option.

```
684 \newcommand*{\tw@define@mackey}[2]{%
685 \IfStrEq{text}{\tw@mk@mackeys}{#1}{%
686 \IfStrEq{symbols}{\tw@mk@mackeys}{#2}{}%
687 }%
688 }
```

Next thing to do is to set up some TikZ-styles.

```
689 \tikzset{
690 menukeys key symbol/.style={
691 rounded corners=0pt,
692 line width=0.1ex,
693 baseline={(0,0)},
694 },
695 menukeys thick/.style={line width=0.25ex},
696}
```

Now we are prepared to generate the key macros. I will be nearly the same way for all keys. Step one is to build a tw@mk@ $\langle key \rangle$  macro and then we define the user-level command  $\langle key \rangle$ 

\shift

```
697 \normalsize
698 \tw@make@key@box{shift}{%
699 \begin{tikzpicture}[yshift=-0.1ex,menukeys key symbol]
700 \draw (0.3ex,0) -- (1.1ex,0) -- (1.1ex,1.2ex) -- %
701 (1.5ex,1.2ex) -- (0.7ex,1.9ex) -- (-0.1ex,1.2ex) -- %
702 (0.3ex,1.2ex) -- cycle;
703 \end{tikzpicture}%
704 }
705 \tw@make@key@macro{\shift}
```

It's a little more complicated if the appearance should differ depending on the OS: The first step again is to define  $tw@mk@\langle key\rangle@mac$  and  $tw@mk@\langle key\rangle@win$ . And then use the starred version tw@make@key@macro\* which creates  $\langle key\rangle$  that depends on the os option,  $\langle key\rangle$ mac and  $\langle key\rangle$ win, that are not affected by os.

\capslock

```
706 \tw@make@key@box{capslock@mac}{%
707 \begin{tikzpicture}[yshift=-0.1ex,menukeys key symbol]
708 \draw (0.3ex,0.7ex) -- (1.1ex,0.7ex) -- (1.1ex,1.2ex) -- %
709 (1.5ex,1.2ex) -- (0.7ex,1.9ex) -- (-0.1ex,1.2ex) -- %
710 (0.3ex,1.2ex) -- cycle;
711 \draw (0.3ex,0) rectangle (1.1ex,0.4ex);
```

```
\end{tikzpicture}%
         712
         713 }
         714 \tw@make@key@box{capslock@win}{%
                \begin{tikzpicture}[yscale=-1,yshift=-1.8ex,menukeys key symbol]
         715
                   \draw (0.3ex,0) -- (1.1ex,0) -- (1.1ex,1.2ex) -- %
         716
         717
                         (1.5ex,1.2ex) -- (0.7ex,1.9ex) -- (-0.1ex,1.2ex) -- %
         718
                         (0.3ex,1.2ex) -- cycle;
         719
                \end{tikzpicture}%
         720 }
         721 \tw@make@key@macro*{\capslock}
         Here are the other macros:
   \tab
         722 \tw@make@key@box{tab@mac}{%
                \begin{tikzpicture}[yshift=0.6ex,menukeys key symbol]
         723
                   \draw [->] (0,0) -- (1em,0);
         724
                   \text{draw (1em,-0.35ex)} -- (1em,0.35ex);
         725
                \end{tikzpicture}%
         726
         727 }
         728 \tw@make@key@box{tab@win}{%
         729
                \begin{tikzpicture}[yshift=0.1ex,menukeys key symbol]
                   \draw [->] (0.2em,0) -- (1.2em,0);
         730
                   \draw (1.2em, -0.35ex) -- (1.2em, 0.35ex);
         731
                   \draw [<-] (0,1ex) -- (1em,1ex);
         732
                   draw (0,0.65ex) -- (0,1.35ex);
         733
                \end{tikzpicture}%
         734
         736 \tw@make@key@macro*{\tab}
   \esc
\oldesc
         737 \def\tw@mk@esc@win{Esc}
         738 \tw@define@mackey{%
         739
                \def\tw@mk@esc@mac{esc}
         740 }{%
                \tw@make@key@box{esc@mac}{%
         741
                   \begin{tikzpicture}[yshift=-0.1ex,menukeys key symbol]
         742
                      draw [->] (0.5ex, 0.5ex) -- ++ (135:1.1ex);
         743
                      \draw (0.5ex, 0.5ex) ++(105:0.6ex) arc (105:-195:0.6ex);
         744
         745
                   \end{tikzpicture}%
                }%
         746
         747 }
         748 \tw@make@key@macro*{\esc}
         749 \def\tw@mk@oldesc@win{Esc}
         750 \tw@define@mackey{%
                \def\tw@mk@oldesc@mac{esc}
         751
         752 }{%
                \tw@make@key@box{oldesc@mac}{%
         753
                   \begin{tikzpicture}[yshift=-0.1ex,menukeys key symbol]
         754
                      draw [->] (0.5ex, 0.5ex) -- ++ (45:1.1ex);
         755
```

```
756
                     draw (0.5ex, 0.5ex) ++(15:0.6ex) arc (15:-285:0.6ex);
        757
                  \end{tikzpicture}%
              }%
        758
        759 }
        760 \tw@make@key@macro*{\oldesc}
 \ctrl
        761 \providecommand\ctrlname{Ctrl}
        762 \def\tw@mk@ctrl@win{\ctrlname}
        763 \def\tw@mk@ctrl@mac{ctrl}
        764 \tw@make@key@macro*{\ctrl}
  \Alt
\AltGr
        765 \def\tw@mk@Alt@win{Alt}
        766 \tw@define@mackey{%
              \def\tw@mk@Alt@mac{alt}%
        767
        768 }{%
              \tw@make@key@box{Alt@mac}{%
        769
                 \begin{tikzpicture}[yshift=-0.1ex,menukeys key symbol]
        770
        771
                     draw (0,1ex) -- (0.5ex,1ex) -- (1ex,0.3ex) -- (1.8ex,0.3ex);
        772
                     \draw (0.8ex,1ex) -- (1.8ex,1ex);
        773
                  \end{tikzpicture}%
        774
              }%
        775 }
        776 \tw@make@key@macro*{\Alt}
        777 \providecommand*{\AltGr}{Alt\,Gr}
  \cmd
        778 \def\tw@mk@cmd@win{%
              \tw@mk@warning{'\string\cmd' only for Mac!}%
        780 }
        781 \tw@define@mackey{%
              \def\tw@mk@cmd@mac{cmd}%
        782
        783 }{%
              \tw@make@key@box{cmd@mac}{%
        784
                 \begin{tikzpicture}[yshift=-0.15ex,menukeys key symbol]
        785
                     draw (0.5ex, 0.7ex) -- (0.5ex, 1.25ex) arc (0:270:0.25ex) -- %
        786
                           (1.25ex, 1ex) arc (-90:180:0.25ex) -- (1ex, 0.25ex) %
        787
        788
                           arc (-180:90:0.25ex) -- (0.25ex,0.5ex) arc (90:360:0.25ex) %
        789
                           -- cycle;
                  \end{tikzpicture}%
        790
              }%
        791
        792 }
        793 \tw@make@key@macro*{\cmd}
\Space
\SPACE
        794 \providecommand*{\Space}{\expandonce{\rule{3em}{0pt}}}
        795 \newcommand{\spacename}{Space}
        796 \providecommand*{\SPACE}{\expandonce{\rule{2em}{0pt}}\spacename\rule{2em}{0pt}}}
```

```
\return
            797 \tw@make@key@box{return@mac}{%
                   \begin{tikzpicture}[yshift=0.25ex,menukeys key symbol]
            798
                      \draw [->, rounded corners=0.2ex] (1.25ex,1ex) -| %
            799
            800
                            (2ex,0) -- (0,0);
            801
                   \end{tikzpicture}%
            802 }
            803 \tw@make@key@box{return@win}{%
                   \begin{tikzpicture}[menukeys key symbol]
            804
                      draw [->] (1ex,1.25ex) |- (0,0);
            805
                   \end{tikzpicture}%
            806
            807 }
            808 \tw@make@key@macro*{\return}
    \enter
            809 \def\tw@mk@enter@win{Enter}
            810 \tw@make@key@box{enter@mac}{%
                   \begin{tikzpicture}[menukeys key symbol]
            811
                      draw (0,0) -- (0.5ex,0.5ex) -- (1ex,0);
            812
                      draw (0,0.55ex) -- (1ex,0.55ex);
            813
                   \end{tikzpicture}%
            814
            816 \tw@make@key@macro*{\enter}
  \winmenu
            817 \def\tw@mk@winmenu@mac{%
                   \tw@mk@warning{'\string\winmenu' only for Windows!}%
            818
            819 }
            820 \tw@make@key@box{winmenu@win}{%
            821
                   \begin{tikzpicture}[yshift=-0.2ex,menukeys key symbol]
            822
                      \draw (0,0) rectangle (1.5ex,1.8ex);
                      \draw (0.25ex, 1.4ex) -- ++ (1ex, 0);
            823
                      \draw (0.25ex, 1ex) -- ++(1ex, 0);
            824
                      \draw (0.25ex, 0.6ex) -- ++(1ex, 0);
            825
            826
                   \end{tikzpicture}%
            828 \tw@make@key@macro*{\winmenu}
\backspace
            829 \tw@make@key@box{backspace}{%
                   \begin{tikzpicture}[yshift=0.65ex,menukeys key symbol]
            830
                      \draw [<-,menukeys thick] (0,0) -- (1.35em,0);
            831
            832
                   \end{tikzpicture}%
            834 \tw@make@key@macro{\backspace}
      \del
  \backdel
            835 \providecommand{\delname}{Del.}
            836 \def\tw@mk@del@win{\delname}
```

```
837 \tw@define@mackey{%
                       \def\tw@mk@del@mac{\delname}%
                838
                839 }{%
                       \tw@make@key@box{del@mac}{%
                840
                          \begin{tikzpicture}[yshift=0.2ex,menukeys key symbol]
                841
                842
                             \draw (0,0) -- (1.5ex,0) -- (2ex,0.5ex) --%
                843
                                   (1.5ex, 1ex) -- (0, 1ex) -- cycle;
                             \draw (0.5ex, 0.2ex) -- (1.1ex, 0.8ex);
                844
                             \draw (0.5ex, 0.8ex) -- (1.1ex, 0.2ex);
                845
                          \end{tikzpicture}%
                846
                       }%
                847
                848 }
                849 \tw@make@key@macro*{\del}
                850 \def\tw@mk@backdel@win{\delname}
                851 \tw@define@mackey{%
                       \def\tw@mk@backdel@mac{\delname}%
                852
                853 }{%
                       \tw@make@key@box{backdel@mac}{%
                854
                855
                          \begin{tikzpicture}[yshift=0.2ex,menukeys key symbol]
                856
                             \draw (2ex,0) -- (0.5ex,0) -- (0,0.5ex) --\%
                                   (0.5ex, 1ex) -- (2ex, 1ex) -- cycle;
                857
                             \frac{1.6ex,0.2ex}{--}
                858
                             \draw (1ex, 0.8ex) -- (1.6ex, 0.2ex);
                859
                          \end{tikzpicture}%
                860
                       }%
                861
                862 }
                863 \tw@make@key@macro*{\backdel}
                Lastly we define the arrow macros:
   \arrowkeyup
 \arrowkeydown
                864 \tw@make@key@box{arrowkeyup}{%
 \arrowkeyleft
                       \begin{tikzpicture}[yshift=-0.2ex,menukeys key symbol]
                          \draw [->] (0,0) -- (0,0.8em);
\arrowkeyright
                866
                867
                       \end{tikzpicture}%
                868 }
                869 \tw@make@key@macro{\arrowkeyup}
                870
                871 \tw@make@key@box{arrowkeydown}{%
                       \begin{tikzpicture}[yshift=0.7em,menukeys key symbol]
                872
                873
                          draw [->] (0,0) -- (0,-0.8em);
                874
                       \end{tikzpicture}%
                875 }
                876 \tw@make@key@macro{\arrowkeydown}
                877
                878 \tw@make@key@box{arrowkeyright}{%
                       \begin{tikzpicture}[yshift=0.5ex,menukeys key symbol]
                879
                          \draw [->] (0,0) -- (0.8em,0);
                880
                       \end{tikzpicture}%
                881
                882 }
                883 \tw@make@key@macro{\arrowkeyright}
                884
```

```
885 \tw@make@key@box{arrowkeyleft}{%
                  \begin{tikzpicture}[yshift=0.5ex,menukeys key symbol]
           886
           887
                     \draw [->] (0,0) -- (-0.8em,0);
                  \end{tikzpicture}%
           888
           889 }
           890 \tw@make@key@macro{\arrowkeyleft}
           And the \arrowkey macro that get's it's direction as argument.
\arrowkey
           891 \newcommand{\arrowkey}[1]{%
           892
                  \IfStrEq{^}{\#1}{\arrowkeyup}{\%}
           893
                     \IfStrEq{v}{#1}{\arrowkeydown}{%
                        \label{lem:limit} $$ \prod_{<}{\#1}{\arrowkeyleft}{\%} $$
           894
                            \IfStrEq{>}{#1}{\arrowkeyright}{%
           895
           896
                               \tw@mk@error{Wrong value '#1' for \string\arrowkey\MessageBreak
                               Possible values are '^', 'v', '<' or '>'}%
           897
                            }%
           898
                        }%
           899
                     }%
           900
                  }%
           901
           902 }
           Close the \infty@mk@definekeys
           903 \fi
```

# 7 Change history

v1.0	Tidy up version and date 1
General: Initial version 1	v1.2a
v1.1 \directory: Renamed \path to \directory because it crashes with biblatex 29 General: Improved manual 1 Load xcolor before menukeys. 14	General: Added braces to the \tikz macro since the parser seems to crash with babel's french option otherwise 1 Replaced obsolete \tikzsytle . 1
v1.1a	v1.2c
\newmenumacro: Added a line to make a new macro robust 29 \tw@define@menu@macro: Fixed	\tw@define@menu@macro: Replaced \protected@edef by \def 28 v1.3
minor bug, that causes a warning about robustifying (issue #23), by deleting the	General: Added TikZ-styles for the key symbols
line to make the command	v1.4
robust 28	\backdel: Added \backdel 34
v1.2 \tw@define@menu@macro: Addded \leavevmode	\oldesc: Fixed direction of \escmac; added \oldesc 32 General: Extended color theme features 1 The path styles now use the text color of the selected color theme (fix issue #16) 1 v1.5
Fixed GitHub issues #9, #10,	General: New option
#11, #13, #17, #24 and #26 . 1	hyperrefcolorlinks 16

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Numbers written in bold face refer to the page where the corresponding entry is described; italic numbers refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

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