## The tikzsymbols package\*

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#### Abstract

Some symbols created using tikz. For differences between the releases see section 2. English is (still) not my native language so there (still) might be some errors  $^{1}$ .  $\odot$ .

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<sup>\*</sup>This document corresponds to tikz symbols v4.04, dated 2018/08/08.

 $<sup>^{1}\</sup>mathrm{They}\ \mathrm{are}$  – of course – on purpose.

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#### 1 Introduction

As far as I can remember this package is the result of me writing a cooking book<sup>2</sup>. Back then I wasn't able to find the cooking symbols I wanted and using time, tikz, lot's of magic (also known as "programming", but only if the respective person knows what's going on) and a documentation in bad grammar<sup>3</sup> I somehow ended up with this package.

During time LATEX3 became known to me and I started experimenting and programming in this (I would say due to its simplicity compared to LATEX  $2_{\varepsilon}$  far superior) language. Well, long story short: I was impressed. And so the idea of writing my package in LATEX3 was born.

I finally took my time and started rewriting my code using LATEX3. This process can be summarized as: "What does this command?", "Why did I define this command?" and more generally "What have I done?!" Well, let's hope my code (and grammar) is better this time<sup>4</sup>.

Well ... thats it, have fun!

## 2 Important changes

The packages should behave the same way as the "old" (LATEX  $2_{\mathcal{E}}$ ) release.

The option draft=absolute is now obsolete and replaced by the much simpler option draft=true.

Furthermore the horribly named command \tikzsymbolsaftersymbolinput is not defined anymore by this package. Please use the new option after-symbol,

<sup>&</sup>lt;sup>2</sup>Well, it's one result, the other one is a cooking book.

<sup>&</sup>lt;sup>3</sup>Not that it' now any better.

<sup>&</sup>lt;sup>4</sup>Looking at own risk. You have been warned.

in combination with the new command \tikzsymbolsset, see section 3 for more information.

## 3 Options

Options can either be set as package options or using \tikzsymbolsset. Some options can only be set as package options, those are described in section 3.1.

It is recommended to use the option draft=true while working on the document.

\tikzsymbolsset

 $\text{tikzsymbolsset } \{\langle keys = values \rangle\}$ 

Most keys, except for the load-time options (section 3.1), can be set using this command.

#### 3.1 Load-time Options

The following options cannot be set using \tikzsymbolsset.

#### 3.1.1 marvosym (true/false)

marvosym = true / false

Please load tikzsymbols after marvosym.

marvosym also defines \Smiley and \Coffeecup. If you prefer those symbols  $(©, \clubsuit)$  over the tikzsymbols ones  $(©, \stackrel{\text{\tiny{33}}}{\bigcirc})$  you can use this option. If set to true tikzsymbols cancels the definition of its \Smiley and \Coffeecup:

Without option "marvosym": $\bigcirc$ "	With option "marvosym": © 🖢
\usepackage{marvosym} \usepackage{tikzsymbols}	\usepackage{marvosym} \usepackage[marvosym]{tikzsymbols}

This option raises an error if set true without loading package marvosym. Can only be set as load-time option.

You may also use the option prefix (section 3.1.3).

#### 3.1.2 usebox (true/false)

In tikzsymbols all symbols are stored inside boxes (\sbox) and while I still have no idea what exactly happens, it shortens the compilation time of the document. By default this option is true.

The drawback is that LATEX has only a limited number of box registers. If you come across an error message regarding boxes try setting usebox=false.

Can only be set as load-time option.

#### 3.1.3 prefix (<string>)

This option takes a string as value: prefix=<string> and adds this prefix to every command defined by this package. So setting prefix=cprefix> adds <prefix> to all commands of this package: \cprefix>command.

 ${\tt prefix}>$  should neither contain any special characters (e.g.,  $\ddot{a}, \ddot{u}, \beta,$  etc.) nor spaces.

By default it is empty, so no prefix is given, if this option is given without an argument refix> is set to tikzsymbols.

Can only be set as a load-time option.

For example:

\usepackage[prefix=tikzsym]{tikzsymbols}

defines \Smiley as \tikzsymSmiley, \Kochtopf as \tikzsymKochtopf, \pot as \tikzsympot, etc.

If you use this option or think about using this option the following command may be handy:

\tikzsymbolsuse

 $tikzsymbolsuse{\langle Symbolname \rangle}$ 

This command takes the name of the symbol without backslash and prints the symbol (or raises an error if the symbol is not defined). Using this command you don't have to worry about a prefix>, just write the command name and this command adds automatically the given prefix to the command name.

#### 3.2 Preamble Options

Most of these commands can be set either as package option or with \tikzsymbolsset.

#### 3.2.1 final (true/false)

final

final = <true/false>

This key has the opposite behavior of the option draft.

It is a boolean key and therefore accepts only true or false and is set to true by default. Setting it to true prints all symbols normally. Setting it to false prints plain vanilla draft-boxes instead which speeds up the compile-process.

#### 3.2.2 draft (true/false)

draft draft = <true/false>

While working on the document it is recommended to set this option to true because creating many symbols may takes some time to compile and by setting this option to true the symbols are replaced by plain vanilla rectangles which are faster to create.

The old option draft=absolute is obsolete and should therefore not be used.

#### 3.2.3 tree (true/false/on/off)

tree tree= <true/on/false/off>

This key accepts true, false and furthermore on and off. The latter do exactly the same as the first ones.

This option has only an effect on the command \BasicTree and his derivates (\Springtree, \Summertree, \Autumntree and \Wintertree) and substitutes them with tikz drawn boxes.

So while draft=true replaces the output of *all* commands with simple black boxes, tree=true/on only replaces the output of "tree"-commands with boxes.

It is recommended to use draft=true, but if you want you can use this option.

#### 3.2.4 after-symbol (<string or command>)

after-symbol

 $after-symbol = {\langle string \ or \ command \rangle}$ 

Is more stable if set using \tikzsymbolsset. The value of this key is inserted after every command of this package. By default it is set to \xspace.

#### 3.2.5 baseline (true/false)

baseline baseline =  $\{\langle true/false \rangle\}$ 

This option mainly exists to let the commands of this package work inside todonotes \todo command. If true adds to each symbol of this package the tikz option baseline=default. If you do not want this, set this option to false. It is set to true by default.

## 4 Symbols

In this section the symbols are introduced. They all change automatically  $\sqcap$  with  $\square$  text-size \$.

#### 4.1 cooking-symbols 📾

\Kochtopf \pot **\Bratpfanne** \fryingpan \Schneebesen \eggbeater \Sieb \sieve \Purierstab \blender \Dreizack \trident \Backblech \bakingplate \Ofen \oven \Pfanne

\pan
\Herd
\cooker
\Saftpresse
\squeezer
\Schussel
\bowl
\Schaler
\peeler
\Reibe
\grater
\Flasche
\bottle
\Nudelholz
\rollingpin

The following table shows all available cooking-symbols and their respective commands. The first column shows the command-names (german & english), the second the optional parameter(s). The optional parameter(s) are for both the german and the english commands the same.

 $\langle scale \rangle$  can be a number between (not exactly) -1400 and (also not exactly) 1400, default is 1.

Da Umlaute nicht in Befehlsnamen vorkommen dürfen, werden die Umlaute ö, ä, ü durch o, a, u ersetzt.

German & Eng	lish Commands	Optional parameter(s)	Output
\Kochtopf	\pot	$[\langle scale \rangle]$	<b>*</b>
\Bratpfanne	\fryingpan	$[\langle scale \rangle]$	
\Schneebesen	\eggbeater	$[\langle scale \rangle]$	↓
\Sieb	\sieve	$[\langle scale \rangle]$	
\Purierstab	\blender	$[\langle scale \rangle]$	I
\Dreizack	\trident	$[\langle scale \rangle]$	Ĭ
\Backblech	\bakingplate	$[\langle scale \rangle]$	
\Ofen	\oven	$[\langle scale \rangle]$	
\Pfanne	\pan	$[\langle scale \rangle]$	₩
\Herd	\cooker	$[\langle scale \rangle]$	000
\Saftpresse	\squeezer	$[\langle scale \rangle]$	
\Schussel	\bowl	$[\langle scale \rangle]$	$\bigcup$
\Schaler	\peeler	$[\langle scale \rangle]$	Ţ
\Reibe	\grater	$[\langle scale \rangle]$	
\Flasche	\bottle	$[\langle scale \rangle]$	Δ
$\Nudelholz$	$\rollingpin$	$[\langle scale \rangle]$	

#### 4.2 Emoticons ©

#### 4.2.1 "normal" Emoticons

\Smiley First column shows the commands, the second the (optional) parameter(s), \Sadey the third the default-output (the only command with a mandatory argument is \Neutrey \Changey). \Changey  $\langle scale \rangle$  can be a number between (not exactly) -2000 and (not exactly) 2000, \cChangey default is 1. \Annoey  $\langle color \rangle$  can be every defined color. Note: The color names shouldn't contain \Laughey \Winkey special characters like \( \beta \), \( \bar{a} \), \( \bar{o} \), \( \ldots \)... \oldWinkey  $\langle \text{Changey's } \langle mood \rangle \text{ has to be between } -2 \text{ and } 2 \text{ (1 equals } \S \text{miley, } -1 \rangle \text{Sadey}$ \Sev and 0 \Neutrev)

\Xey	and o (Neutrey).	
\Innocey	Commands	(Optional) parameter(s)
\wInnocey \Cooley	\Smiley	$[\langle scale \rangle] [\langle color \rangle]$
\Tongey	\Sadey	$\lceil \langle scale \rangle \rceil \lceil \langle color \rangle \rceil$
Nursey	\Neutrey	$[\langle scale \rangle] [\langle color \rangle]$
\Vomey	\Changey	$\lceil \langle scale \rangle \rceil \lceil \langle color \rangle \rceil \{\langle mood \rangle \}$
\Walley	\cChangey	$[\langle scale \rangle] [\langle color1 \rangle] [\langle color2 \rangle] [\langle color3 \rangle]$
\rWalley	\Annoey	$[\langle scale \rangle] [\langle color \rangle]$
\Cat	\Laughey	$[\langle scale \rangle] [\langle color \rangle] [\langle mouth \ color \rangle]$
\SchrodingersCat	\ 1.7. 1	

\Ninja \Sleepey \NiceReapey

(:) (1)  $\odot$  $r3\rangle$ ]  $\{\langle mood \rangle\}$ (3) **(** \Winkey  $[\langle scale \rangle] [\langle color \rangle]$ \oldWinkey  $[\langle scale \rangle] [\langle color \rangle]$ **③** <u>(i)</u> \Sey  $[\langle scale \rangle] [\langle color \rangle]$ (XX) \Xey  $[\langle scale \rangle] [\langle color \rangle]$  \Innocey  $[\langle scale \rangle] [\langle color \rangle] [\langle halo\ color \rangle]$   $[\langle scale \rangle]$ \wInnocey \Cooley  $[\langle scale \rangle] [\langle color \rangle]$ (3) \Tongey  $[\langle scale \rangle] [\langle color \rangle] [\langle tongue\ color \rangle]$ ٥  $[\langle scale \rangle] [\langle color \rangle] [\langle cap \ color \rangle] [\langle cross \ color \rangle]$ \Nursey  $\mathbb{G}^{\mathbb{Z}_2}$ \Vomey  $[\langle scale \rangle] [\langle color \rangle] [\langle vomit\ color \rangle]$ G₩ \Walley  $[\langle scale \rangle] [\langle color \rangle] [\langle wall\ color \rangle]$ Œ  $[\langle scale \rangle] [\langle color \rangle] [\langle wall\ color \rangle]$ \rWalley \Cat  $[\langle scale \rangle]$ M \SchrodingersCat  $[\langle scale \rangle] \{\langle case \rangle\}$ **6** \Ninja  $[\langle scale \rangle] [\langle color \rangle] [\langle headband \ color \rangle] [\langle eye \ color \rangle]$ \Sleepey  $[\langle scale \rangle] [\langle color \rangle] [\langle cap \ color \rangle] [\langle star \ color \rangle]$ \NiceReapey

Output

r" for "random generated cracks".

Examples: \Sadey[][red]

\Cooley[-3][cyan]

#### **4.2.2** "3D" Emoticons ♥ ♥

\dSmiley \dSadey \dNeutrey \dChangey \dcChangey \dAnnoey \dLaughey \dWinkey \dSey \dXey \dInnocey \dCooley \dNinja \drWalley \dWalley \dVomey \dNursey

\dTongey \dSleepey \olddWinkey First column shows the commands (note: the "3D" Emoticons begin with \d...), the second shows the (optional) parameter(s), the third shows the default-output (the only command with a mandatory argument is \dChangey).

 $\langle scale \rangle$  can be a number between a small number (under -500 for sure) and a large number (over 500 for sure), default is 1.

 $\langle color \rangle$  can be every defined color (see examples below). Note: The color names shouldn't contain special characters like  $\beta$ ,  $\ddot{a}$ ,  $\ddot{o}$ , ...

\Changey's  $\langle mood \rangle$  has to be between -2 and 2 (1 equals \dSmiley, -1 \dSadey and 0 \dNeutrey).

Commands	Optional parameter(s)	Output
\dSmiley	$[\langle scale \rangle] [\langle color \rangle]$	<u> </u>
\dSadey	$[\langle scale \rangle] [\langle color \rangle]$	
\dNeutrey	$[\langle scale \rangle] [\langle color \rangle]$	<u></u>
$\dChangey$	$[\langle scale \rangle] [\langle color \rangle] \{\langle mood \rangle\}$	<b>©</b>
$\dcChangey$	$[\langle scale \rangle] [\langle color1 \rangle] [\langle color2 \rangle] [\langle color3 \rangle] \{\langle mood \rangle\}$	<b>©</b>
$\d$ Laughey	$[\langle scale \rangle] [\langle color \rangle] [\langle mouth\ color \rangle]$	<b>=</b>
$\d$ Annoey	$[\langle scale \rangle] [\langle color \rangle]$	<b>=</b>
$\d$ Winkey	$[\langle scale \rangle] [\langle color \rangle]$	<b>9</b>
$\old Minkey$	$[\langle scale \rangle] [\langle color \rangle]$	<b>9</b>
\dSey	$[\langle scale \rangle] [\langle color \rangle]$	<u> </u>
\dXey	$[\langle scale \rangle] [\langle color \rangle]$	<b>2</b>
$\dInnocey$	$[\langle scale \rangle] [\langle color \rangle] [\langle halo \ color \rangle]$	3
\dCooley	$[\langle scale \rangle] [\langle color \rangle]$	<del>=</del>
$\dTongey$	$[\langle scale \rangle] [\langle color \rangle] [\langle tongue\ color \rangle]$	<b>3</b>
\dNursey	$[\langle scale \rangle] [\langle color \rangle] [\langle cap \ color \rangle] [\langle cross \ color \rangle]$	ڧ
\dVomey	$[\langle scale \rangle] [\langle color \rangle] [\langle vomit\ color \rangle]$	€ pp.
\dWalley	$[\langle scale \rangle] [\langle color \rangle] [\langle wall\ color \rangle]$	C.E.
\drWalley	$[\langle scale \rangle] [\langle color \rangle] [\langle wall\ color \rangle]$	<u>C</u>
\dNinja	$[\langle scale \rangle] [\langle color \rangle] [\langle headband\ color \rangle] [\langle eye\ color \rangle]$	<b>°</b>
\dSleepey	$[\langle scale \rangle] [\langle color \rangle] [\langle cap \ color \rangle] [\langle star \ color \rangle]$	<b>*</b>

"r" for "random generated cracks".

```
Examples: \dSadey[][red]  \dCooley[-3][cyan]  \dVomey[1.5][green!70!black][olive]  \dNursey[][yellow][blue][red]  \dNinja[1.3][][violet][red]  \dChangey{-1}  \dChangey{-1}  \dChangey{0}
```

\$\dChangey{1} \cup \dChangey{1.41} \cup \dChangey{2} \cup\$

\dcChangey[][][blue]{-1} \dcChangey[][][blue]{0.5} \dcChangey

If you intent to change the color of \dcChangey you may define a new command so that you do not have to write those brackets each time.

#### 4.3 other Symbols 9

\Strichmaxerl \Candle \Fire \Coffeecup \Chair \Bed \Tribar \Moai \Snowman \Strichmaxerl's optional parameters 2–5 ( $\langle left\ arm \rangle$  to  $\langle right\ leg \rangle$ ) can be a number between -360 and 360 (of course the number can be even greater or even smaller.). The parameters are the angles between the body and the separate parts of \Strichmaxerl (see examples).

 $\langle scale \rangle$  can be a very great and a very small negative number (but I don't think, that you need so large symbols).

 $\langle color\rangle$  can be every defined color. Note: The color names shouldn't contain special characters like ß, ä, ö, . . . .

Commands	Optional parameter(s)	Output
\Strichmaxerl	$[\langle scale \rangle] [\langle left \ arm \rangle] [\langle right \ arm \rangle] [\langle left \ leg \rangle] [\langle right \ leg \rangle]$	8
\Candle	$[\langle scale \rangle]$	Ô
\Fire	$[\langle scale \rangle]$	*
\Coffeecup	$[\langle scale \rangle]$	<b>≅</b>
\Chair	$[\langle scale \rangle]$	Ŗ
\Bed	$[\langle scale \rangle]$	
\Moai	$[\langle scale \rangle]$	8
\Tribar	$[\langle scale \rangle] [\langle color \ 1 \rangle] [\langle color \ 2 \rangle] [\langle color \ 3 \rangle]$	
\Snowman	$[\langle scale \rangle]$	<b>₹</b> \$*



\Tribar[-10][blue][red][green]

\Tribar[2.1][blue][blue!50][blue!20]

\Strichmaxerl[1][10][30][40][4] %,

\Strichmaxerl[1.4][210][310][10][90] 💃,

\Strichmaxer1[2][510][110][190][990] m ?,

\Strichmaxer1[0.9][54][28][95][16] %

\Strichmaxerl[][54][28] %

\BasicTree \Springtree \Summertree \Wintertree \WorstTree

#### 4.4 Trees $\square$

 $\langle scale \rangle$  can be a number between (not exactly) -900 and (again not exactly) 900, default is 1.

 $\langle color \rangle$  can be every defined color (see examples below). Note: The color names shouldn't contain special characters like  $\beta$ ,  $\ddot{a}$ ,  $\ddot{o}$ , . . . .

 $\{\langle leaf \rangle\}$  uses the colors of  $\{\langle leaf \ color \ a \rangle\}$  and  $\{\langle leaf \ color \ b \rangle\}$ , you can leave this one empty if you don't want leaves (\Wintertree is without leaf, see examples below).

If you are using those trees, LATEX needs longer to produce the output. So you may use the package option tree=off, or (better) draft=true (see section section 3.2.2 and section 3.2.3) to make LATEX faster.

Furthermore this trees are pretty much stolen from the tikz manual.

Commands	Optional/Needed parameter(s)	Output
\BasicTree	$ [\langle scale \rangle] \{\langle trunk \ color \rangle\} \{\langle leaf \ color \ a \rangle\} \{\langle leaf \ color \ b \rangle\} \{\langle leaf \rangle\} $	see below
\Springtree	$[\langle scale \rangle]$	
\Summertree	$[\langle scale \rangle]$	
\Autumntree	$[\langle scale \rangle]$	
\Wintertree	$[\langle scale \rangle]$	
\WorstTree	$\lceil \langle scale \rangle \rceil$	<del>?</del>

\BasicTree[5]{orange!95!black}{orange!80!black}{orange!70!black}{leaf}
\BasicTree[2]{blue!65!white}{cyan!50!white}{cyan!50!white}{} \BasicTree[-1.54]{green!20!black}{green!50!black}{green!70!black}{leaf}
\colorbox{black}{\BasicTree[3.75]{gray!80}{gray!50}{gray!40}{leaf}}

I think it's better if you define your own trees using \newcommand and \BasicTree:

\newcommand{\Myicetree}[1][1]{%
\BasicTree[#1]{blue!65!white}{cyan!50!white}{{}}

## 5 Known errors & Problems

#### marvosym

Make sure you load marvosym before tikzsymbols because both packages define \Smiley, marvosym via \newcommand tikzsymbols via \DeclareDocumentCommand.

If you load marvosym *after* tikzsymbols, LATEX generates an error-message because \Smiley has already been defined.

If you load marvosym before tikzsymbols, tikzsymbols will overwrite marvosym's Smiley (and Coffeecup) and no error-message is generated (if you like the \Smiley from marvosym more, use the tikzsymbols option marvosym or prefix).

#### babel

If you encounter an error message like

```
Argument of \pgffor@next has an extra }
```

while using babel with e.g. language "francais" and for example  $\Cooley$  you may add

\usetikzlibrary{babel}

to your preamble. This should (hopefully) fix the problem.

## 6 Nobody is perfect

If you find a bug please send me a mail involving a *minimal example* showing the bug and a short description. Please mention "tikzsymbols" in the header, "gmx" has a habit of putting mails into the spam-folder and it helps me to recognize those mails faster. This can also be the reason why I may need some time to answer the mail.

Suggestions are also welcome.

## 7 Danksagung

I would like to thank all users for providing bug reports and helping to improve this package.

Furthermore many thanks to my brother helping me improving the symbols.

## 8 Changes

See the README.md file.