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 \square .

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^{*}This document corresponds to tikz symbols v4.07, dated 2017/09/05.

 $^{^{1}}$ They are – of course – on purpose (expect for "avaiable" (sic!)).

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1 Introduction

As far as I can remember this package is the result of me writing a cooking book². 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 grammar³ 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_{ε} 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 time⁴.

Well ... that's it, have fun!

²Well, it's one result, the other one is a cooking book.

³Not that it' now any better.

⁴Looking at own risk. You have been warned.

2 Important changes

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

2017 Option usebox can be used during the document.

old The horribly named command \tikzsymbolsaftersymbolinput is not defined anymore by this package. Please use the new option after-symbol, in combination with the new command \tikzsymbolsset, see section 3 for more information.

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

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

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

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 \S and \S and \S use this option. If set to true tikzsymbols cancels the definition of its \S and \S and \S

Without option "marvosym": \Box	With option "marvosym": © 🛎
\usepackage{marvosym}	\usepackage{marvosym}
\usepackage{tikzsymbols}	<pre>\usepackage[marvosym]{tikzsymbols}</pre>

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 3.1.2).

3.1.2 prefix $(\langle string \rangle)$

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

 $\langle \textit{prefix} \rangle$ should neither contain any special characters (e.g., ä, ü, ß, etc.) nor spaces.

By default it is empty, so no prefix is given, if this option is given without an argument $\langle prefix \rangle$ 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 $\langle prefix \rangle$, just write the command name and this command adds automatically the given prefix to the command name.

Examples: \tikzsymbolsuse{Smiley}[2]	
\tikzsymbolsuse{BasicTree}[1.2]{bl	$lack$ {red!50!black}{red}{leaf}
\tikzsymbolsuse{Ofen}	
\tikzsymbolsuse{Fire}[-1.3]	
etc.	

3.2 Normal Options

Most of these options can be set either as a package-option or with \tikzsymbolsset.

3.2.1 draft (true/false)

 $\texttt{draft} \quad \texttt{draft} = \langle \textit{true/false} \rangle$

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 (with the same height and width as the symbols⁵) which are faster to create.

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

3.2.2 final (true/false)

final final= $\langle true/false \rangle$

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.

3.2.3 tree (true/false/on/off)

tree tree= \langle true/on/false/off \rangle

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

This option has only an effect on the command \BasicTree and its 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 ($\langle string \ or \ command \rangle$)

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 global-scale $(\langle number \rangle)$ symbol-scale $(\langle key\text{-}value\ list \rangle)$

```
global-scale
symbol-scale
```

```
global-scale = \{\langle number \rangle\}
symbol-scale = \{\langle symbol-1=number-1, symbol-2=number-2,... \rangle\}
```

global-scale can be used to scale *all* commands by given $\langle number \rangle$.

If only some specific symbols should be scaled, you may use the second option and specify which symbol or symbols (name of the symbol without backslash) should be scaled. Using the german name (if available) has the same effect as using the english one.

Note: You can scale the symbols in this package in three different ways: The first is to scale *all* symbols using global-scale, the second is scaling specific symbols using symbol-scale and the third is by using the optional argument provided by the symbols (which I call local-scale; e.g. \Smiley[2]).

The important thing is that those scaling methods do not cancel each other, but behave multiplicative.

If a local scale is given (e.g. Smiley[2]) with global-scale=3 the resulting scaling will be $3 \cdot 2 = 6$. Is furthermore this specific symbol is also scaled (e.g. by 1.1), the resulting scaling (for this symbol) will be $3 \cdot 1.1 \cdot 2 = 6.6$.

Examples: \tikzsymbolsset{symbol-scale={ Smiley= 1.5 }}
\tikzsymbolsset{symbol-scale={ Smiley= 5 }}
\tikzsymbolsset{symbol-scale={ Smiley= 2, Schneebesen=2.1 }} \tikzsymbolsset{global-scale=3,symbol-scale={ Smiley= 2, Schneebesen=2.1 }}

Note: Using "eggbeater" instead of "Schneebesen" does the same thing.

3.2.6 append-style ($\langle tikz, keyval \rangle$)

append-style

```
append-style = \{\langle tikz' \ keyval \rangle\}
```

With this option you can append tikz' $\langle keyval \rangle$ to tikzsymbols internal style.

Note: The style is called __tikzsymbols and while the name will probably not change, you are discouraged to use it directly unless it is *really* necessary).

3.2.7 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 set to true it 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.

3.2.8 remember-picture (true/false)

remember-picture

remember-picture = $\{\langle true/false \rangle\}$

Adds to each symbol created by this package the tikz option remember picture=\langle true/false \rangle. It is set to false by default.

3.2.9 usebox (true/false)

usebox

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

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.

4 Symbols

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

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 \Knoblauchpresse

\garlicpress

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 $\operatorname{ersetzt}.$

German & English (Commands	Optional parameter(s)	Output
\Kochtopf	\pot	$[\langle scale \rangle]$	
\Bratpfanne	\fryingpan	$[\langle scale \rangle]$	
\Schneebesen	\eggbeater	$[\langle scale \rangle]$	
\Sieb	\sieve	$[\langle scale \rangle]$	
\Purierstab	\blender	$[\langle scale \rangle]$	
\Dreizack	\trident	$[\langle scale \rangle]$	
\Backblech	\bakingplate	$[\langle scale \rangle]$	
\Ofen	\oven	$[\langle scale \rangle]$	
\Pfanne	\pan	$[\langle scale \rangle]$	
\Herd	\cooker	$[\langle scale \rangle]$	
\Saftpresse	\squeezer	$[\langle scale \rangle]$	
\Schussel	\bowl	$[\langle scale \rangle]$	
\Schaler	\peeler	$[\langle scale \rangle]$	
\Reibe	\grater	$[\langle scale \rangle]$	
\Flasche	\bottle	$[\langle scale \rangle]$	
\N udelholz	\rollingpin	$[\langle scale \rangle]$	
\K noblauchpresse	\garlicpress	$[\langle scale \rangle]$	

4.2 Emoticons \square

4.2.1 "Normal" Emoticons \square

\Smiley \Sadey \Neutrey \Changey \cChangey \Annoey \Laughey \Winkey \oldWinkey \Sey \Xey \Innocey \wInnocey	the third the default-one (Changey). \(\langle \) can be a nodefault is 1. \(\langle \) can be even special characters like (Changey's \(\langle \) moode and 0 \(\text{Neutrey} \)).	ws the commands, the second the (optional) parametroutput (the only command with a mandatory argument umber between (not exactly) -2000 and (not exactly) ery defined color. Note: The color names shouldn't color, \ddot{a} , \ddot{a} , \ddot{o} , d has to be between -2 and 2 (1 equals \Smiley, -1 \art at's $\langle case \rangle$ can either be 1 (alive), 0 (unknown)	nent is 2000, ontain Sadey
<u> </u>	Commands	(Optional) parameter(s)	Output
\Cooley \Tongey \Nursey \Vomey \Walley \rWalley \Cat \SchrodingersCat \Ninja \Sleepey \NiceReapey	Commands \Smiley \Sadey \Neutrey \Changey \cChangey \Annoey \Laughey \Winkey \oldWinkey \Sey \Xey \Innocey \WInnocey \Cooley \Tongey \Nursey \Vomey		Output
	\Walley	$[\langle scale \rangle] [\langle color \rangle] [\langle wall \ color \rangle]$	
	"Nanwadiney ed & Courts". \SchrodingersCat \Ninja \Sleepey \NiceReapey		

Examples: Sadey[][red]

\Cooley[-3][cyan]
\Vomey[1.5][green!80!black][olive]
\Nursey[][yellow][blue][red] \square .
\Ninja[1.3][][violet][red] .
\colorbox{yellow}{\Winkey \Annoey[-1]\Neutrey}
\textcolor{blue}{\Sey}
\Sleepey[1][white][blue][yellow!95!black]
$\SchrodingersCat{1}$
$\SchrodingersCat{0}$
\SchrodingersCat{-1}
$\label{lem:changey} $$ \ \Box $
$\Changey{1} \square \Changey{1.41} \square \Changey{2} \square$
$\verb \cChangey{1} \ \square \ \verb \cChangey{0.5} \ \square \ \verb \cChangey{0.1} \ \square$
$\cChangey{0} \square \cChangey{-0.5} \square \cChangey{-1} \square \cChangey{-2} \square$
\cChangey[][][blue] $\{-1\}$ \cChangey[][][blue] $\{0.5\}$ \Box
If you intent to change the color of \cChangey you may define a new com-
mand so that you do not have to write those brackets each time.

4.2.2 "3D" Emoticons \Box

\dSmiley \dSadey \dNeutrey \dChangey \dcChangey \dcChangey \dAnnoey \dLaughey \dWinkey	\d), the second output (the only \(\scale \) can be a large number (\(\scale \) can names shouldn't \(\Changey's \)	In shows the commands (note: the "3D" Emoticons and shows the (optional) parameter(s), the third shows to command with a mandatory argument is \dChangey e a number between a small number (under -500 for over 500 for sure), default is 1. be every defined color (see examples below). Note: contain special characters like β , \ddot{a} , \ddot{o} , $\langle mood \rangle$ has to be between -2 and 2 (1 equals \dS	the default- 7). r sure) and The color
\dXey \dInnocey	\dSadey and 0 \	dNeutrey).	
\dCooley	Commands	Optional parameter(s)	Output
\dNinja \drWalley \dWalley \dVomey \dNursey \dTongey \dSleepey \olddWinkey	\dSmiley \dSadey \dNeutrey \dChangey \dcChangey \dLaughey \dAnnoey \dWinkey \olddWinkey \dSey \dXey \dInnocey \dCooley \dTongey \dNursey \dVomey \dWalley		
	for \danka dnhey	$[\langle scale \rangle] [\langle color \rangle] [\langle wall\ color \rangle]$	
genera	ted\@maksä. _\dSleepey		
	\dCooley[- \dVomey[1. \dNursey[] \dNinja[1. 	dSadey[][red] 3][cyan] 5][green!70!black][olive] [yellow][blue][red] 3][][violet][red] -2} dChangey{-1.367} dChangey{-1} dChangey{2}	Shangey{0}

$\dcChangey{2} \square \dcChangey{1} \square \dcChangey{0.5} \square \dcChangey{0.1}$
$\square \dcChangey{0} \square \dcChangey{-0.5} \square \dcChangey{-1} \square \dcChangey{-2}$
$\c) \c) \c) \c) \c) \c) \c) \c) \c) \c) $
If you intent to change the color of \dcChangey you may define a new com-
mand so that you do not have to write those brackets each time.

4.3 Other Symbols \square

\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	$[\langle scale \rangle] [\langle left \ arm \rangle] [\langle right \ arm \rangle] [\langle left \ leg \rangle] [\langle right \ leg \rangle]$	
\Candle	$[\langle scale \rangle]$	
\Fire	$[\langle scale \rangle]$	
\Coffeecup	$[\langle scale \rangle]$	
\Chair	$[\langle scale \rangle]$	
\Bed	$[\langle scale \rangle]$	
\Moai	$[\langle scale \rangle]$	
\Tribar	$[\langle scale \rangle] [\langle color \ 1 \rangle] [\langle color \ 2 \rangle] [\langle color \ 3 \rangle]$	
\Snowman	$[\langle scale \rangle]$	

\Tribar[-10][blue][red][green]	
\Tribar[2.1][blue][blue!50][blu	le!20]
\Strichmaxerl[1][10][30][40][4] \Strichmaxerl[1.4][210][310][10 \Strichmaxerl[2][510][110][190] \Strichmaxerl[0.9][54][28][95][\Strichmaxerl[][54][28][0] [90] □, [990] □,

\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 β , \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 3.2.1 and section 3.2.3) to make LATEX faster.

Furthermore those 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	$[\langle scale \rangle]$	
\colorbo	<pre>xamples Some "normal" trees: x{green}{\BasicTree{red}{orange}{yellow}{leaf}} ee[5]{orange!95!black}{orange!80!black}{orange!70!black} ee[2]{blue!65!white}{cyan!50!white}{cyan!50!white}{}</pre>	
\basicir	ee[-1.54]{green!20!black}{green!50!black}{green!70!bla	ck}{leal}
\colorbo	x{black}{\BasicTree[3.75]{gray!80}{gray!50}{gray!40}{1	eaf}}
and us:	sicTree examples Some "draftbox" trees (using tree=false) ing the same trees with tree=off/false or draft(=true): x{green}{\BasicTree{red}{orange}{yellow}{leaf}}	:

\BasicTree[5]{orange!95!black}{orange!80!black}{orange!70!black}{leaf}
\BasicTree[2]{blue!65!white}{cyan!50!white}{cyan!50!white}{}
$\label{lem:basicTree} $$ \BasicTree[-1.54]{green!20!black}{green!50!black}{green!70!black}{leaf} $$$
\
\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}{cyan!50!white}{}}

5 FAQ (Known errors and problems)

Or "Questions I assume would be frequently asked, if people would frequently ask questions".

5.1 How to get rid of the space after each symbol?

By default the package adds \xspace after each command. To remove it use the option after-symbol. Using

\tikzsymbolsset{after-symbol={}}

removes the \xspace command and thus the unwanted space.

5.2 Using the symbols causes unwanted $\langle problem \rangle$. How could I get rid of it?

This could have something to do with question 5.5 (after you made sure that the symbols cause the problem). Try using setting the option usebox=false and recompile a few times. If the problem persists, please send a bug report (section 6).

5.3 I am getting the error-message Argument of \pgffor@next has an extra }

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.

5.4 Another package I load already defines $\langle symbol \rangle$.

You can override pretty much every symbol simply by loading tikzsymbols last as it defines the symbols via \DeclareDocumentCommand (see xparse).

If you want to use the symbols of both packages you may have a look at option prefix.

5.5 Does this package store symbols in boxes and reuses them instead of creating a new picture every time?

Yes, it does. It can become a problem if LATEX runs out of boxes. If this happens, use usebox=false.

Furthermore, tikz allows to reference pictures using e.g. remember picture. This also influences the symbols of tikzsymbols. As those symbols are stored and exact copies are printed, labels attached to the symbols get repeated. In this case, also try using usebox=false

5.6 Are the symbols created with the environment tikzpicture? Yes, they are.

6 Nobody is perfect

If you find a bug please send me a mail (or report it on GitHub) involving a minimal example showing the bug and a short description (english or german). Please mention (if you are writing a mail) "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.