

KKsymbols Package Documentation

Kosei Kawaguchi a.k.a. KKT_{EX}

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目次

1 Outline 3

2 Acknowledgements / Credit 4

3 Installation 4

4 Caution 4

5 Updates for LuaTeX-jā v20260107.0 4

6 Commands 4

 6.1 The maru series 5

7 Rotation 6

 7.1 Commands 6

 7.2 Vertical mode 7

8 The seihou series 7

9 The kakko series 8

10 License 9

11 Version History 9

1 Outline

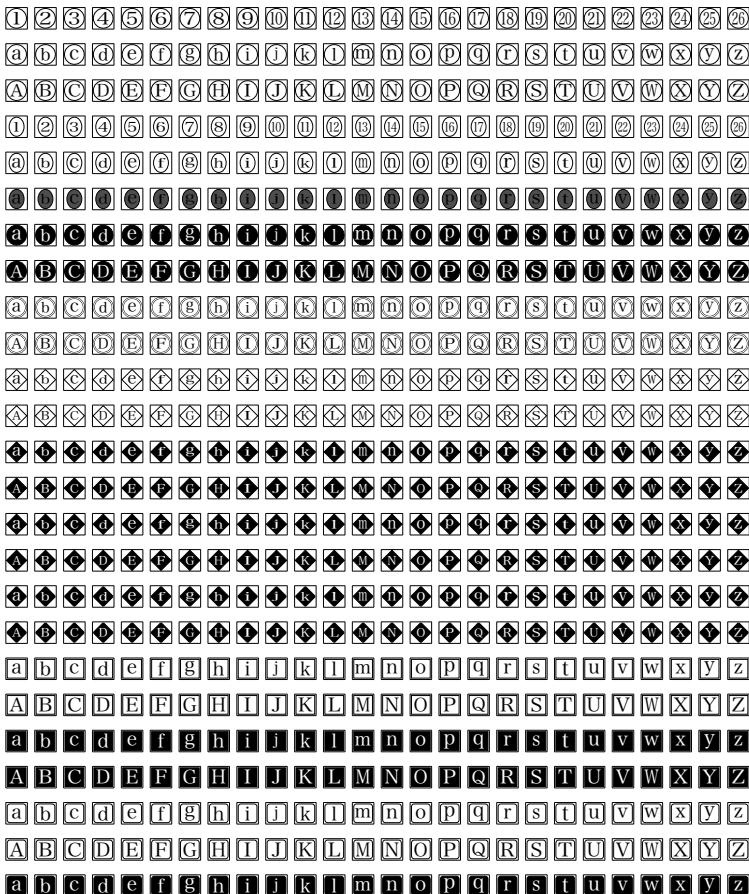
Japanese: このパッケージは、既存の otf フォントに頼ることなく、「任意のフォント、任意の引数で」丸数字などの特殊記号を再現する目的で作成されています。

luatexja-otf における `\ajMaru` などは、その設計上いたしかなないデメリットとして、早見表がないと使い物にならないというものがありません。しかし、本パッケージでは、一から特殊文字を設計し直すという取り組みを行なっているため、そのようなデメリットが解消されています。

English: This package is designed to reproduce special characters, such as circled numbers, using arbitrary fonts and parameters without relying on existing otf font sets.

A known disadvantage of commands like `\ajMaru` in `luatexja-otf` is that they are practically unusable without a reference chart. In contrast, this package addresses this issue by re-engineering special characters from the ground up, eliminating the need for complex lookup tables.

あ あ (あ) あ あ



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
a b c d e f g h i j k l m n o p q r s t u v w x y z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

2 Acknowledgements / Credit

In developing this package, I made extensive use of the advice I received from Mr. Yusuke Terada.

I recommend you to refer to his article when you develop new-type symbols on \LaTeX .

<https://doratex.hatenablog.jp/entry/20211205/1638697391>

3 Installation

Place `KKsymbols.sty` in a directory where \LaTeX can find it, e.g., your local `texmf` tree or alongside your document.

Dependencies:

- `LuaLaTeX-ja`
- `tikz`
- `clac`

Load the package:

```
\usepackage{KKsymbols}
```

4 Caution

Since this package internally calls `\ltjghostbeforejachar` and `\ltjghostafterjachar`, it can be used only in a LuaLaTeX environment.

5 Updates for LuaTeX-ja v20260107.0

With the update to `luatexja` version 20260107.0, the commands provided by the `KKsymbols` package now behave identically to native Japanese characters. This improvement is due to the bug fixes in `\ltjghostbeforejachar` and `\ltjghostafterjachar`. Previously, when multiple commands from this package were used consecutively, proper glue was not inserted between them; however, this issue has been resolved in this update.

6 Commands

6.1 The maru series

This package provides `\maru`, `\kuromaru`, and `\nmaru`. Each of them takes one mandatory argument and no optional arguments. You can pass strings of any length and in any font as arguments.

In most cases, `\maru{argument}` will meet your demands. However, only when you take lower-case alphabet in these commands, you must use star-command just like `\maru*{m}`¹⁾.

Input
Mind the star option!

```

1 % Normal Characters
2 \maru{A}\maru{あ}\maru{QED.}
3
4 % Lowercase Alphabetic Characters
5 \maru*{a}\maru*{j}\maru*{z}
```

Output

Ⓐ あ ㊦

ⓐ j ㊧

They are used as follows.

表 1: maru series

argument	<code>\maru</code>	<code>\kuromaru</code>	<code>\nmaru</code>	<code>\jegg</code>	<code>\jegg*</code>
1	Ⓐ	⓫	Ⓘ	①	①
97	㊦	㊧	㊨	㊩	㊪
だ	㊫	㊬	㊭	㊮	㊯
ばばば	㊰	㊱	㊲	㊳	㊴
m	Ⓜ	Ⓝ	Ⓞ	Ⓟ	Ⓠ
Qjg	㊵	㊶	㊷	㊸	㊹

They behave as if they were single kanji or hiragana characters:

あいう㊦あいう①②③あいうえお

The spacing between `\maru` and other characters is adjusted using `\ltjghostbeforejachar` and `\ltjghostafterjachar` so that it behaves like hiragana or kanji.

1) `\jegg` is an exception of this rule. When you use `\jegg`, you don't have to put the star option no matter the argument is lowercase or not. If you do it, the background color of the `\jegg` changes into gray. Only in this case, the effect of the option is different.

When changing the font size using commands such as `\Large`, each command is scaled proportionally according to the font size change:



You can also change the current font:



7 Rotation

7.1 Commands

This package provides `\RotTate` and `\RotYoko`. The differences are as follows:

In horizontal mode You should use `\RotYoko`. The default value is 0. Therefore, if you use `\RotYoko` with no arguments, this is equal to `\RotYoko[0]`

In vertical mode You should use `\RotTate`. The default value is 90. Therefore, if you use `\RotTate` with no arguments, this is equal to `\RotTate[90]`

From a technical perspective: Commands like `\maru` provided by this package automatically rotate their arguments based on the “current typesetting direction” Specifically, the package applies a 0-degree rotation for horizontal writing (yoko-gaki) and a 90-degree rotation for vertical writing (tate-gaki).

The commands `\RotYoko` and `\RotTate` redefine this “automatic rotation angle” to the value specified in their arguments. Consequently, the effect is persistent unless localized (similar to how font-size commands like `\small` behave). Therefore, please ensure you use appropriate scoping, such as enclosing the command within curly braces `{...}`, when applying these settings.

Input

```
1 % In horizontal mode
2 {\RotYoko[45]\kakko{あ}\kakko{い}\kakko{う}}\par
3 {\RotYoko[60]\kakko{1}\kakko{2}\kakko{3}}
4
5 % In vertical mode
6 \parbox<t>{5\zw}{% <t> option requires lltjext package.
7   {\RotTate[45]\kakko{あ}\kakko{い}\kakko{う}}\par
8   {\RotTate[60]\kakko{1}\kakko{2}\kakko{3}}
9 }
```

Output

```

(㊦)(㊧)(㊨)
(㊩)(㊪)(㊫)

(㊬) (㊭)
(㊮) (㊯)
(㊰) (㊱)

```

7.2 Vertical mode

When you want to typeset ㊦, for instance, in vertical mode, you should use `\RotTate` command. As described in the previous subsection, the effect of `\RotTate` lasts, when localized, in a certain group. So when you typeset hiragana or kanji, use it like this:

Input

```

1 % In vertical mode
2 \parbox<t>{5\zw}{%
3   {\RotTate[0]\kakko{あ}\kakko{い}\kakko{う}}\par
4   \kakko{1}\kakko{1}\kakko{3}
5 }

```

Output

```

(1) (あ)
(1) (い)
(3) (う)

```

8 The seihou series

The commands introduced below are used in exactly the same way as the maru series. In most cases, `\seihou{argument}` will meet your demands. However, only when you take lowercase alphabet in these commands, you must use star-command just like `\seihou*{m}`.

表 2: seihou series

argument	\seihou	\kuroseihou	\seimaru	\kuroseimaru
1				
97				
だ				
ばばば				
m				
Qjg				

表 3: hishi series

argument	\hishi	\kurohishi	\maruhishi	\kuomaruhishi
1				
97				
だ				
ばばば				
m				
Qjg				

Input	Mind the star option!
<pre> 1 % Normal Characters 2 \seihou{A}\seihou{あ}\seihou{QED.} 3 4 % Lowercase Alphabetic Characters 5 \seihou*{a}\seihou*{j}\seihou*{z} </pre>	
Output	

9 The kakko series

The commands introduced below are used in exactly the same way as the maru series.

In most cases, `\kakko{argument}` will meet your demands. However, only when you take lowercase alphabet in these commands, you must use star-command just like `\kakko*{m}`.

表 4: kakko series ①

argument	\kakko	\sumikakko	\kakukakko	\kikakko	\yakko
1	(1)	【1】	[1]	〔1〕	⟨1⟩
97	⟨97⟩	【97】	[97]	〔97〕	⟨97⟩
だ	⟨だ⟩	【だ】	[だ]	〔だ〕	⟨だ⟩
ぼぼぼ	⟨ぼぼぼ⟩	【ぼぼぼ】	[ぼぼぼ]	〔ぼぼぼ〕	⟨ぼぼぼ⟩
m	⟨m⟩	【m】	[m]	〔m〕	⟨m⟩
Qjg	⟨Qjg⟩	【Qjg】	[Qjg]	〔Qjg〕	⟨Qjg⟩

表 5: kakko series ②

argument	\nykakko	\namikakko	\kagikakko	\nkagikakko	\ichimoji
1	⟨1⟩	{1}	「1」	『1』	1
97	⟨97⟩	{97}	「97」	『97』	97
だ	⟨だ⟩	{だ}	「だ」	『だ』	だ
ぼぼぼ	⟨ぼぼぼ⟩	{ぼぼぼ}	「ぼぼぼ」	『ぼぼぼ』	ぼぼぼ
m	⟨m⟩	{m}	「m」	『m』	m
Qjg	⟨Qjg⟩	{Qjg}	「Qjg」	『Qjg』	Qjg

Input

Mind the star option!

```

1 % Normal Characters
2 \kakko{A}\kakko{あ}\kakko{QED.}
3
4 % Lowercase Alphabetic Characters
5 \kakko*{a}\kakko*{j}\kakko*{z}

```

Output

```

(A)(あ)(QED)
(a)(j)(z)

```

10 License

Released under the MIT License.

11 Version History

- v1.0.0 (2025/10/03) — Initial public release.
- v1.0.1–1.0.4 — Added \ichimoji; fixed various bugs.

- **v1.1.0 (2025/10/28)** — Unified all commands to zenkaku (full-width).
- **v1.1.1 (2025/11/10)** — Refined `\ichimoji` scaling logic.
- **v2.0.0 (2025/12/23)** — Overhauled scaling to match OTF character quality.
- **v2.0.1 (2026/01/08)** — Added explanations regarding several important notes. In addition, the manual has been updated to reflect bug fixes introduced in luatexja version 20260107.0.
- **v2.0.2 (2026/01/20)** — This update fixes a critical bug where arguments of the `\kakko` command could overflow when using specific fonts (for example, Hiragino fonts with weights W4 and above).