

jiffy

A TikZ-Based Page-Layout Diagnostic Tool for L^AT_EX

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With contributions from Gemini Pro and ChatGPT

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Abstract

jiffy produces a graphical diagnostic of a L^AT_EX document's page geometry. It displays the physical sheet, text block, header, footer baseline, margin-note column, TeX's one-inch reference lines, and the principal horizontal and vertical layout dimensions. In two-sided mode, jiffy produces companion verso and recto diagrams followed by a consolidated data sheet containing measured values, diagnostics, and document/typography information.

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1 Purpose

The traditional layout package is useful for inspecting L^AT_EX page parameters, but the numerical parameters do not always make the physical page immediately obvious. `jiffy` provides a TikZ-based map of the same general subject: the relationship between the physical page and the layout dimensions that place the text, header, footer, and margin-note areas.

The package is intended primarily as a diagnostic and teaching tool. It is especially useful while designing book and report layouts, where the verso and recto pages may use different side-margin settings.

2 Installation

After installation from CTAN, load the package in the normal way:

```
\usepackage{jiffy}
```

For local testing, place `jiffy.sty` in the same directory as the document being compiled. The package requires the standard packages `tikz`, `xcolor`, `nextpage`, `iftex`, `pgfopts`, and `pdflscape`. The TikZ libraries `calc` and `arrows.meta` are used internally.

3 Basic use

Load `jiffy` in the preamble and place `\jiffy` where the diagnostic pages are to be generated:

```
\documentclass[11pt,twoside]{book}
```

```
\usepackage[
  pt_precision=1,
  fullpage=false,
  display-language=english-us
]{jiffy}
```

```
\begin{document}
```

```
\jiffy
```

```
\end{document}
```

The public command is:

\jiffy Generates the diagnostic pages appropriate to the document's sidedness. In a two-sided document, the package first advances to an even page and then generates a verso geometry diagram, a recto geometry diagram, and a data sheet. In a one-sided document, it generates one geometry diagram using L^AT_EX's odd-page layout settings, followed by the data sheet.

Consequently, `\jiffy` is most naturally used at a point where a short diagnostic insert is acceptable. The pages produced by the command use an empty page style.

4 Package options

4.1 Numerical precision

pt_precision=<integer> Sets the number of decimal places printed for values in points. The default is 1.

The millimeter and inch precision values are derived automatically:

Unit	Decimal places
pt	<code>pt_precision</code>
mm	<code>pt_precision + 1</code>
in	<code>pt_precision + 2</code>

For example,

```
\usepackage[pt_precision=1]{jiffy}
```

prints point values to one decimal place, millimeter values to two decimal places, and inch values to three decimal places.

4.2 Display language

display-language=<language> Selects the language used by `jiffy` for diagram labels, table headings, and diagnostic messages. The default is **english-us**.

The currently defined values are:

Option value	Language
english-us	English (US)
vietnamese	Vietnamese
spanish	Spanish
german	German
french	French
dutch	Dutch

If an unsupported display language is requested, `jiffy` issues a package warning and falls back to **english-us**.

4.3 Full-page rendering

fullpage=false Uses the miniature diagnostic renderer. This is the default.

fullpage=true Uses a true 1:1 overlay anchored to the physical PDF page.

The synonyms **yes** and **no** are accepted. A bare **fullpage** option is equivalent to **fullpage=true**:

```
\usepackage[fullpage]{jiffy}  
\usepackage[fullpage=true]{jiffy}  
\usepackage[fullpage=yes]{jiffy}
```

In full-page mode, dimensions that would otherwise lie outside the physical sheet are moved inside the page. Renderer choice does not change the number or order of diagnostic pages.

5 Diagnostic pages

5.1 Two-sided documents

For a two-sided document, `\jiffy` creates the following sequence:

1. an even-page **verso** geometry diagram;
2. an odd-page **recto** geometry diagram;
3. an even-page **data sheet**.

The command uses `nextpage`'s even-page clearing mechanism so that the first geometry page has the intended verso parity.

5.2 One-sided documents

For a one-sided document, there is no distinct verso geometry: $\text{\LaTeX}$ uses its odd-page layout settings for every page. Therefore, `\jiffy` creates only:

1. one **geometry diagram**;
2. one **data sheet**.

No even-page clearing is performed in one-sided mode, because page parity has no layout significance there.

5.3 Margin-note side

The diagram follows the active margin-note side. In two-sided layouts, the margin-note column can switch with page parity; the result is also reversed when `\reversemarginpar` is in effect.

6 Geometry shown by the diagram

6.1 TeX's one-inch reference lines

jiffy explicitly draws the historical TeX reference lines. Their physical positions are

$$x_{\text{ref}} = 1\text{ in} + \text{\hoffset}, \quad y_{\text{ref}} = 1\text{ in} + \text{\voffset}.$$

The physical left edge of the text block is therefore

$$x_{\text{text}} = x_{\text{ref}} + \begin{cases} \text{\evensidemargin}, & \text{verso,} \\ \text{\oddsidemargin}, & \text{recto.} \end{cases}$$

The physical top edge of the text block is

$$y_{\text{text}} = y_{\text{ref}} + \text{\topmargin} + \text{\headheight} + \text{\headsep}.$$

When `\hoffset` or `\voffset` is nonzero, jiffy marks the corresponding reference line with a dot and includes the nonzero offset in the parameter table.

6.2 Reference numbers

The numbered circles on the geometry diagrams correspond to the following quantities.

Ref.	Quantity	Meaning
1W	<code>\paperwidth</code>	physical paper width
1H	<code>\paperheight</code>	physical paper height
2W	<code>\textwidth</code>	text-block width
2H	<code>\textheight</code>	text-block height
3W	<code>\evensidemargin</code>	verso/even TeX side-margin parameter
4W	<code>\oddsidemargin</code>	recto/odd TeX side-margin parameter
3H	physical top margin	top of paper to top of text block
4H	physical bottom margin	bottom of text block to bottom of paper
5W	<code>\marginparwidth</code>	margin-note column width
6W	<code>\marginparsep</code>	text-to-margin-note separation
5H	<code>\headheight</code>	header height
6H	<code>\headsep</code>	header-to-text separation
7H	<code>\footskip</code>	text-bottom to footer-baseline distance

The data sheet also reports the actual physical left and right margins for both verso and recto pages. These physical margins are derived values; they should not be confused with the TeX parameters `\evensidemargin` and `\oddsidemargin`.

7 The data sheet

The final diagnostic page is the data sheet. It consolidates information that would otherwise obscure the geometry diagram or diagrams. It contains three groups.

7.1 Diagnostics

jiffy checks whether the following items extend beyond the physical page:

- the text block;
- the header;
- the margin-note column;
- the footer baseline;
- TeX's horizontal and vertical one-inch reference lines.

If no off-page condition is found, the data sheet reports that no off-page conditions were detected. If a condition is found, the intended diagnostic includes the amount of the overrun in points, millimeters, and inches.

7.2 Page parameters

The parameter table reports the principal dimensions in three units: points, millimeters, and inches. Its **BVR** column identifies whether a row applies to both pages (B), the verso page (V), or the recto page (R).

7.3 Document and typography

The data sheet also records selected properties of the surrounding document at the point where the layout is computed:

- TeX engine (pdfTeX, LuaTeX, or XeTeX);
- active document language, when available;
- one- or two-column mode;
- current font size and baseline skip;
- font encoding, family, series, and shape;
- traditional TeX mathematics or `unicode-math`;
- current text-font name.

8 Example

The distribution includes `jiffy-example.tex`. It defines a two-sided page and exercises the package directly. A representative package invocation is:

```
\usepackage[
  pt_precision=1,
  fullpage,
  display-language=english-us
]{jiffy}
```

To compare the miniature renderer with the 1:1 renderer, change `fullpage` to `fullpage=false` and compile again.

9 Compatibility and scope

jiffy detects pdfTeX, LuaTeX, and XeTeX. It reads the standard L^AT_EX page-layout lengths directly and is therefore useful with page layouts established by the document class or by layout packages such as `geometry`, provided those lengths have their final values when `\jiffy` is executed.

The package is diagnostic: it reports and visualizes the current layout; it does not itself redesign the page.

10 Distribution files

A compact CTAN distribution may contain:

File	Purpose
<code>jiffy.sty</code>	package implementation
<code>jiffy-doc.tex</code>	documentation source
<code>jiffy-doc.pdf</code>	compiled documentation
<code>jiffy-example.tex</code>	standalone example
<code>README.md</code>	package summary and installation information

The release history is maintained in this manual, so a separate `CHANGELOG.md` is optional rather than necessary.

11 Support

Repository and issue tracker:

<https://github.com/squidmore/jiffy>

Supporting email:

`jiffy.latex@gmail.com`

12 License

jiffy is distributed under the L^AT_EX Project Public License (LPPL), version 1.3c.

13 Change history

Version 0.3 — 2026/09/13

- Rewrote the user documentation to describe the current package implementation and the output appropriate to one- and two-sided documents.
- Documented the `pt_precision`, `display-language`, and `fullpage` options.
- Changed the default point display precision from three decimal places to one; millimeters and inches consequently default to two and three decimal places, respectively.
- Corrected the off-page diagnostic formatter so overrun values are reported reliably in points, millimeters, and inches.
- Documented miniature and true 1:1 full-page rendering.
- Changed one-sided output to one geometry diagram plus one data sheet; two-sided output remains verso, recto, and data sheet.
- Documented the parameter data sheet, off-page diagnostics, and document/typography report.
- Moved the maintained release history into the documentation; a separate `CHANGELOG.md` is no longer required.
- Changed the dimensional notation assignments from H/V (Horizontal/Vertical) to W/H (Width/Height) to eliminate ambiguity and match standard L^AT_EX terminology.
- Removed the large page numbers from the bottom corners of the geometry diagrams.
- Fixed a missing backslash bug in the `\if@twocolumn` check that previously caused compilation errors in one-column documents.

Development snapshot 0.2b — 2026/08/30

This was not submitted to CTAN. A separate `CHANGELOG.md` was created during development; its history is incorporated here for the 0.3 release.

Version 0.2a — 2026/08/29

- Created the supporting address `jiffy.latex@gmail.com`.
- Created the GitHub account/repository used for jiffy.
- CTAN package repository assigned to `/graphics/pgf/contrib/jiffy`.

Version 0.2 — 2026/08/28

Initial CTAN release.