

L^AT_EX

L^AT_EX is the most popular macro package for T_EX. (A macro package is a set of commands that an author typically uses to write documents.)

This page does not try to answer all questions about L^AT_EX; rather we suggest some documentation, add-on components, and resources that a L^AT_EX user can start with. We limit our recommendations to freely-available materials, and you can click on the text to see the documentation on the Internet. (In case the Internet is not convenient, when the documentation is also available in a typical T_EX installation we provide its name in a footnote; to view it locally using *texdoc*,¹ run “*texdoc name*” at a command prompt.)

Starting out

The article `\begin{here} % getting started` gives a thorough description aimed at a complete beginner. In particular, to use L^AT_EX, users must install a T_EX distribution, such as MiK_T_EX on Windows, or T_EX Live on a Unix system such as GNU/Linux or on Windows, or MacT_EX on Macintosh OS X.

Online tutorials have been created by *Andy Roberts* and the *TUGIndia user group*.

Documentation

ESSENTIALS The most widely-recommended introduction is *The Not-So Short Guide to L^AT_EX 2_ε*.² For typesetting mathematics, use the the American Mathematical Society’s AMS-L^AT_EX package, introduced in the primer, *Getting up and running with AMS-L^AT_EX*.³

REFERENCES The official L^AT_EX documentation from the development team is *L^AT_EX 2_ε for Authors*;⁴ this focuses on changes made in recent versions of L^AT_EX. The nearest thing to a general reference manual for L^AT_EX is the unofficial *L^AT_EX: Structured documents for T_EX*.⁵ Look for symbols in the *Comprehensive List of Symbols*.⁶ A two-page *L^AT_EX Cheat Sheet*⁷ is available. The document *l2tabu*⁸ can help you to acquire sound habits by suggesting what you should consider taboo.

FAQ’s Many web pages offer help with T_EX and L^AT_EX. Particularly useful is the *English FAQ*⁹ and the *TUG web resources page*. The *PracT_EX Journal* is an online magazine aimed at beginning and intermediate users, and *TUGboat* has published many articles at all levels nearly since the inception of T_EX.

Books There are many books about L^AT_EX; visit the *T_EX Users Group Bookstore* for discounts.

Selected L^AT_EX packages

PAGE SIZE AND SHAPE Adjust the page dimensions and orientation with *geometry*.¹⁰ Control headers and footers with *fancyhdr*.¹¹

GRAPHICS Import graphics into a L^AT_EX document with the L^AT_EX team’s *graphicx* package, and the related *graphics*. The official documentation is *Packages in the ‘graphics’ bundle*.¹² Another package in the same bundle is *color*.¹³ For even more color capability use *xcolor*.¹⁴ An excellent introduction to using these is the article *Strategies for including graphics in L^AT_EX documents*.

INDEX AND BIBLIOGRAPHY Make an index with *makeidx*.¹⁵ For bibliographies, people use *BIBT_EX*.¹⁶ Two powerful tools based on it are: produce your bibliography in a natural science styles with *natbib*,¹⁷ and generate your own style by answering a sequence of questions with *custom-bib*.¹⁸

¹texdoc ²lshort ³amshelp ⁴usrguide ⁵latex2e ⁶comprehensive ⁷latexcheat ⁸l2tabuen ⁹faq ¹⁰geometry
¹¹fancyhdr ¹²grfguide ¹³color ¹⁴xcolor ¹⁵makeindex ¹⁶bibtex ¹⁷natbib ¹⁸custom-bib

COMPUTER CODE AND COMMENTING OUT For computer code, look at [listings](#).¹⁹ The [verbatim](#)²⁰ package is also useful for computer code, and includes a `comment` environment to suppress parts of the document.

HYPERTEXT The [hyperref](#)²¹ package gives you hyper-document features, such as making table of contents entries link to the corresponding document part. If you don't need active links, typeset web addresses with [url](#),²² which also does computer file names.

PRESENTATIONS You can get presentation slides by adjusting the page geometry and writing a regular document. For more sophisticated effects use [beamer](#).²³ The article [Beamer by example](#) will get you started.

Output and fonts

OUTPUT The [pdfTeX](#)²⁴ program extends T_EX: it can directly produce web-friendly PDF files, as well as the traditional DVI format. For instance, this document was generated under T_EX Live with `pdflatex latex-doc-ptr.tex`. A further extension to that, [XeTeX](#),²⁵ can use fonts from your underlying computer platform, in addition to the fonts from your T_EX distribution. (Mathematics requires much special tuning, though, so most system fonts cannot be used for math.)

FONTS The font system documentation from the L^AT_EX developers is [L^AT_EX 2_ε font selection](#).²⁶ To move beyond T_EX's default fonts, these two documents describe some reasonable and free alternatives: [A Survey of Free Math Fonts for T_EX and L^AT_EX](#) and [The L^AT_EX Font Catalogue](#). More is on the [T_EX Users Group's font page](#).

Tools for composing L^AT_EX

There are many environments to make writing L^AT_EX source easier. For instance, many people use a text editor of some sort, such as Emacs with the add-on mode [AUC-T_EX](#). A new environment that is free, runs on all major computer platforms, and combines the best ideas from available environments while retaining simplicity, is [T_EXworks](#).

Community

There are many [user groups](#) for T_EX. The [Comprehensive T_EX Archive Network](#) contains many more packages than any distribution. In addition, if you are stuck on an issue, the Usenet group [comp.text.tex](#) and [texhax@tug.org](#) are the most popular mailing lists. You can search more than a decade of L^AT_EX discussions, or post a question yourself.

Miscellaneous

HISTORY L^AT_EX was first written in 1985 by Leslie Lamport, building on Donald Knuth's T_EX. It is now maintained and developed by the [L^AT_EX3 Project](#)²⁷ group.

PRONUNCIATION L^AT_EX can be pronounced as “la-tech” or “lay-tech,” with emphasis on either syllable. (We prefer the first, with emphasis on the first syllable.)

¹⁹[listings](#) ²⁰[verbatim](#) ²¹[hyperref](#) ²²[url](#) ²³[beamer](#) ²⁴[pdftex](#) ²⁵[xetex](#) ²⁶[fntguide](#) ²⁷[latex3](#)