

## NAME

etex, einitex, evirtex – extended TeX

## SYNOPSIS

**etex** [*options*] [**& format**] [*file* | \ *commands*]

## DESCRIPTION

Run the e-TeX typesetter on *file*, usually creating *file.dvi*. If the file argument has no extension, ".tex" will be appended to it. Instead of a filename, a set of e-TeX commands can be given, the first of which must start with a backslash. With a **& format** argument e-TeX uses a different set of precompiled commands, contained in *format.fmt*; it is usually better to use the **-fmt format** option instead.

e-TeX is the first concrete result of an international research & development project, the NTS Project, which was established under the aegis of DANTE e.V. during 1992. The aims of the project are to perpetuate and develop the spirit and philosophy of TeX, whilst respecting Knuth's wish that TeX should remain frozen.

e-TeX can be used in two different modes: in *compatibility mode* it is supposed to be completely interchangeable with standard TeX. In *extended mode* several new primitives are added that facilitate (among other things) bidirectional typesetting.

An extended mode format is generated by prefixing the name of the source file for the format with an asterisk (\*). Such formats are often prefixed with an 'e', hence **etex** as the extended version of **tex** and **elatex** as the extended version of **latex**. However, **eplain** is an exception to this rule.

The **einitex** and **evirtex** commands are e-TeX's analogues to the **initex** and **virtex** commands. In this installation, they are symbolic links to the **etex** executable. These symbolic links may not exist at all.

e-TeX's handling of its command-line arguments is similar to that of the other TeX programs in the *web2c* implementation.

## OPTIONS

This version of e-TeX understands the following command line options.

### **-fmt format**

Use *format* as the name of the format to be used, instead of the name by which e-TeX was called or a %& line.

**-enc** Enable the encTeX extensions. This option is only effective in combination with **-ini**. For documentation of the encTeX extensions see <http://www.olsak.net/enc tex.html>.

**-etex** Enable the e-TeX extensions. This option is only effective in combination with **-ini**.

### **-file-line-error**

Print error messages in the form *file:line:error* which is similar to the way many compilers format them.

### **-no-file-line-error**

Disable printing error messages in the *file:line:error* style.

### **-file-line-error-style**

This is the old name of the **-file-line-error** option.

**-halt-on-error**

Exit with an error code when an error is encountered during processing.

**-help** Print help message and exit.

**-ini** Start in *INI* mode, which is used to dump formats. The *INI* mode can be used for type-setting, but no format is preloaded, and basic initializations like setting catcodes may be required.

**-interaction mode**

Sets the interaction mode. The mode can be either *batchmode*, *nonstopmode*, *scrollmode*, and *errorstopmode*. The meaning of these modes is the same as that of the corresponding `\commands`.

**-ipc** Send DVI output to a socket as well as the usual output file. Whether this option is available is the choice of the installer.

**-ipc-start**

As **-ipc**, and starts the server at the other end as well. Whether this option is available is the choice of the installer.

**-jobname name**

Use *name* for the job name, instead of deriving it from the name of the input file.

**-kpathsea-debug bitmask**

Sets path searching debugging flags according to the bitmask. See the *Kpathsea* manual for details.

**-mktex fnt**

Enable `mktex fnt`, where *fnt* must be either *tex* or *tfm*.

**-mltex** Enable  $\text{MLT}_{\text{E}}\text{X}$  extensions. Only effective in combination with **-ini**.

**-no-mktex fnt**

Disable `mktex fnt`, where *fnt* must be either *tex* or *tfm*.

**-output-comment string**

Use *string* for the *DVI* file comment instead of the date.

**-output-directory directory**

*directory* instead of the current directory. Look up input files in *directory* first, then along the normal search path.

**-parse-first-line**

If the first line of the main input file begins with `%&` parse it to look for a dump name or a **-translate-file** option.

**-no-parse-first-line**

Disable parsing of the first line of the main input file.

**-progname name**

Pretend to be program *name*. This affects both the format used and the search paths.

**-recorder**

Enable the filename recorder. This leaves a trace of the files opened for input and output in a file with extension *.fls*.

**-shell-escape**

Enable the `\write18{command}` construct. The *command* can be any shell command. This construct is normally disallowed for security reasons.

**-no-shell-escape**

Disable the `\write18{command}` construct, even if it is enabled in the *texmf.cnf* file.

**-src-specials**

Insert source specials into the *DVI* file.

**-src-specials where**

Insert source specials in certain places of the *DVI* file. *where* is a comma-separated value list: *cr*, *display*, *hbox*, *math*, *par*, *parent*, or *vbox*.

**-translate-file tcxname**

Use the *tcxname* translation table to set the mapping of input characters and re-mapping of output characters.

**-default-translate-file tcxname**

Like **-translate-file** except that a `%&` line can overrule this setting.

**-version**

Print version information and exit.

**ENVIRONMENT**

See the Kpathsearch library documentation (the ‘Path specifications’ node) for precise details of how the environment variables are used. The **kpsewhich** utility can be used to query the values of the variables.

One caveat: In most e-TeX formats, you cannot use `~` in a filename you give directly to e-TeX, because `~` is an active character, and hence is expanded, not taken as part of the filename. Other programs, such as METAFONT, do not have this problem.

**TEXMFOUTPUT**

Normally, e-TeX puts its output files in the current directory. If any output file cannot be opened there, it tries to open it in the directory specified in the environment variable **TEXMFOUTPUT**. There is no default value for that variable. For example, if you say *etex paper* and the current directory is not writable, if **TEXMFOUTPUT** has the value */tmp*, e-TeX attempts to create */tmp/paper.log* (and */tmp/paper.dvi*, if any output is produced.)

**TEXINPUTS**

Search path for `\input` and `\openin` files. This should probably start with `“.”`, so that user files are found before system files. An empty path component will be replaced with the paths defined in the *texmf.cnf* file. For example, set **TEXINPUTS** to `“./:/home/usr/tex:”` to prepend the current directory and `“/home/user/tex”` to the standard search path.

**TEXFORMATS**

Search path for format files.

**TEXPOOL**

search path for **etex** internal strings.

**TEXEDIT**

Command template for switching to editor. The default, usually **vi**, is set when e- $\text{\TeX}$  is compiled.

**TFMFILES**

Search path for font metric (*.tfm*) files.

**FILES**

The location of the files mentioned below varies from system to system. Use the **kpsewhich** utility to find their locations.

*etex.pool*

Text file containing e- $\text{\TeX}$ 's internal strings.

*texfonts.map*

Filename mapping definitions.

*\*.tfm*

Metric files for e- $\text{\TeX}$ 's fonts.

*\*.fmt*

Predigested e- $\text{\TeX}$  format (*.fmt*) files.

**NOTES**

Starting with version 1.40, pdf $\text{\TeX}$  incorporates the e- $\text{\TeX}$  extensions, so in this installation e $\text{\TeX}$  is just a symbolic link to pdf $\text{\TeX}$ . See **pdftex(1)**. This manual page is not meant to be exhaustive. The complete documentation for this version of e- $\text{\TeX}$  can be found in the info manual *Web2C: A TeX implementation*.

**BUGS**

This version of e- $\text{\TeX}$  implements a number of optional extensions. In fact, many of these extensions conflict to a greater or lesser extent with the definition of e- $\text{\TeX}$ . When such extensions are enabled, the banner printed when e- $\text{\TeX}$  starts is changed to print **e- $\text{\TeX}$ k** instead of **e- $\text{\TeX}$** .

This version of e- $\text{\TeX}$  fails to trap arithmetic overflow when dimensions are added or subtracted. Cases where this occurs are rare, but when it does the generated *DVI* file will be invalid.

**SEE ALSO**

**pdftex(1)**, **tex(1)**, **mf(1)**.

**AUTHORS**

e- $\text{\TeX}$  was developed by Peter Breitenlohner (and the NTS team).

$\text{\TeX}$  was designed by Donald E. Knuth, who implemented it using his *system* for Pascal programs. It was ported to Unix at Stanford by Howard Trickey, and at Cornell by Pavel Curtis. The version now offered with the Unix  $\text{\TeX}$  distribution is that generated by the *to C* system (**web2c**), originally written by Tomas Rokicki and Tim Morgan.

The enc $\text{\TeX}$  extensions were written by Petr Olsak.