The **epsf** package*

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This file contains TEX macros to include an Encapsulated PostScript graphic. It works by finding the bounding box comment, calculating the correct scale values, and inserting a vbox of the appropriate size at the current position in the TEX document.

To use, simply use

```
\input epsf % somewhere early on in your TeX file

% then where you want to insert a vbox for a figure:
\epsfbox{filename.ps}
```

Alternatively, you can supply your own bounding box by

```
\epsfbox[0 0 30 50]{filename.ps}
```

This will not read in the file, and will instead use the bounding box you specify.

The effect will be to typeset the figure as a TEX box, at the point of your `\epsfbox` command. By default, the graphic will have its 'natural' width (namely the width of its bounding box, as described in `filename.ps`). The TEX box will have depth zero.

You can enlarge or reduce the figure by using
`\epsfxsize =` ⟨*dimen*⟩ `\epsfbox{`⟨*filename.ps*⟩`}`
or
`\epsfysize =` ⟨*dimen*⟩ `\epsfbox{`⟨*filename.ps*⟩`}`
instead. Then the width of the TEX box will be `\epsfxsize` and its height will be scaled proportionately (or the height will be `\epsfysize` and its width will be scaled proportionately).

The width (and height) is restored to zero after each use, so `\epsfxsize` or `\epsfysize` must be specified before *each* use of `\epsfbox`.

A more general facility for sizing is available by defining the `\epsfsize` macro. Normally you can redefine this macro to do almost anything. The first parameter

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[*] This manual corresponds to epsf v2.7.3, dated 23 July 2005.

is the natural x size of the PostScript graphic, the second parameter is the natural y size of the PostScript graphic. It must return the xsize to use, or 0 if natural scaling is to be used. Common uses include:

```
\epsfxsize  % just leave the old value alone
0pt         % use the natural sizes
#1          % use the natural sizes
\hsize      % scale to full width
0.5#1       % scale to 50% of natural size
\ifnum #1 > \hsize \hsize \else #1\fi
            % smaller of natural, hsize
```

If you want TEX to report the size of the figure (as a message on your terminal when it processes each figure), use '`\epsfverbosetrue`'.

If you only want to get the bounding box extents, without producing any output boxes or `\special{}`, then use `\epsfgetbb{`⟨*filename*⟩`}`. The bounding box corner coordinates are saved in the macros `\epsfllx`, `\epsflly`, `\epsfurx`, and `\epsfury` in PostScript units of big points.

Revision history:

- `epsf.tex` macro file: Originally written by Tomas Rokicki of Radical Eye Software, 29 Mar 1989.
- Revised by Don Knuth, 3 Jan 1990.
- Revised by Tomas Rokicki, 18 Jul 1990.

  Accept bounding boxes with no space after the colon.
- Revised by Nelson H. F. Beebe `<beebe@math.utah.edu>`, 03 Dec 1991 [2.0].

  Add version number and date typeout.

  Use `\immediate\write16` instead of `\message` to ensure output on new line.

  Handle nested EPS files.

  Handle `%%BoundingBox: (atend)` lines.

  Do not quit when blank lines are found.

  Add a few percents to remove generation of spurious blank space.

  Move `\special` output to `\epsfspecial{`⟨*filename*⟩`}` so that other macro packages can input this one, then change the definition of `\epsfspecial` to match another DVI driver.

  Move size computation to `\epsfsetsize` which can be called by the user; the verbose output of the bounding box and scaled width and height happens here.

- Revised by Nelson H. F. Beebe `<beebe@math.utah.edu>`, 05 May 1992 [2.1].

  Wrap `\leavevmode\hbox{}` around `\vbox{}` with the `\special` so that `\epsffile{}` can be used inside `\begin{center}...\end{center}`

- Revised by Nelson H. F. Beebe `<beebe@math.utah.edu>`, 09 Dec 1992 [2.2].

  Introduce `\epsfshow{true,false}` and `\epsfframe{true,false}` macros; the latter suppresses the insertion of the PostScript, and instead just creates an empty box, which may be handy for rapid prototyping.

- Revised by Nelson H. F. Beebe `<beebe@math.utah.edu>`, 14 Dec 1992 [2.3].

  Add `\epsfshowfilename{true,false}`. When `true`, and `\epsfshowfalse` is specified, the PostScript file name will be displayed centered in the figure box.

- Revised by Nelson H. F. Beebe `<beebe@math.utah.edu>`, 20 June 1993 [2.4].

  Remove non-zero debug setting of `\epsfframemargin`, and change margin handling to preserve EPS image size and aspect ratio, so that the actual box is `\epsfxsize` + `\epsfframemargin` wide by `\epsfysize` + `\epsfframemargin` high. Reduce output of `\epsfshowfilenametrue` to just the bare file name.

- Revised by Nelson H. F. Beebe `<beebe@math.utah.edu>`, 13 July 1993 [2.5].

  Add `\epsfframethickness` for control of `\epsfframe` frame lines.

- Revised by Nelson H. F. Beebe `<beebe@math.utah.edu>`, 02 July 1996 [2.6]

  Add missing initialization `\epsfatendfalse`; the lack of this resulted in the wrong `BoundingBox` being picked up, mea culpa, sigh…

- Revised by Nelson H. F. Beebe `<beebe@math.utah.edu>`, 25 October 1996 [2.7]

  Update to match changes in from dvips 5-600 distribution: new user-accessible macros: `\epsfclipon`, `\epsfclipoff`, `\epsfdrafton`, `\epsfdraftoff`, change `\empty` to `\epsfempty`.

- Revised by Nelson H. F. Beebe `<beebe@math.utah.edu>`, 18 May 2002 [2.7.1]

  Add write statements to echo input file names. Prior to that change, an error in such a file could be quite hard to track down: a long list of TEX page numbers could suddenly be followed by "TEX buffer capacity" exceeded, without any indication of the file that was responsible.

- Revised by Nelson H. F. Beebe `<beebe@math.utah.edu>`, 16 May 2003 [2.7.2]

  Supply two critical percent characters that were mistakenly omitted in version 2.7.1, and resulted in a small amount of spurious horizontal space.

- Revised by Nelson H. F. Beebe `<beebe@math.utah.edu>`,
  Karl Berry `<karl@freefriends.org>`,
  and Robin Fairbairns `<Robin.Fairbairns@cl.cam.ac.uk>`,
  23 July 2005 [2.7.3]

  Add critical `\hbox{}` wrapper in `\epsfsetgraph` so that `\epsfbox{}` does not conflict with LaTeX `center` environment when `\epsfbox{}` is surrounded by other horizonal objects. Improve macro readability by adding legal, but invisible-in-typeset-output, spaces. Ensure that verbose status reports come inside `(filename ...)` list.