

*magnification*

1

**magnification.** When T<sub>E</sub>X typesets your document, it multiplies all dimensions by a magnification factor  $f/1000$ , where  $f$  is the value of the `\mag` parameter (p. ‘`\mag`’). Since the default value of `\mag` is 1000, the normal case is that your document is typeset just as specified. Increasing the magnification is often useful when you’re typesetting a document that will later be photoreduced.

You can also apply magnification to a single font so as to get a smaller or larger version of that font than its “design size”. You need to provide the device driver with a shape file (see “font”, p. ‘`font`’) for each magnification of a font that you’re using—unless the fonts are built into your printer and your device driver knows about them. When you’re defining a font with the `\font` command (p. ‘`\font`’), you can specify a magnification with the word ‘`scaled`’. For example:

```
\font\largerbold = cmbx10 scaled 2000
```

defines ‘`\largerbold`’ as a font that is twice as big as `cmbx10` (Computer Modern Bold Extended 10-point) and has the character shapes uniformly enlarged by a factor of 2.

Many computer centers find it convenient to provide fonts scaled by a ratio of 1.2, corresponding to magnification values of 1200, 1440, etc. T<sub>E</sub>X has special names for these values: ‘`\magstep1`’ for 1200, ‘`\magstep2`’ for 1440, and so forth up to ‘`\magstep5`’. The special value ‘`\magstephalf`’ corresponds to magnification by  $\sqrt{1.2}$ , which is visually halfway between ‘`\magstep0`’ (no magnification) and ‘`\magstep1`’. For example:

```
\font\bigbold = cmbx10 scaled \magstephalf
```

You can specify a dimension as it will be measured in the final document independent of magnification by putting ‘`true`’ in front of the unit. For instance, ‘`\kern 8 true pt`’ produces a kern of 8 points whatever the magnification.