

```
\show <token>
\showthe <argument>
\showbox <number>
\showlists
```

These commands record information in the log of your T_EX run:

- `\show` records the meaning of `<token>`.
- `\showthe` records whatever tokens would be produced by `\the <argument>` (see p. ‘`\the`’).
- `\showbox` records the contents of the box register numbered `<number>`. The number of leading dots in the log indicates the number of levels of nesting of inner boxes.
- `\showlists` records the contents of each of the lists that T_EX is currently constructing. (These lists are nested one within another.) See pages 88–89 of *The T_EXbook* for further information about interpreting the output of `\showlists`.

For `\show` and `\showthe`, T_EX also displays the information at your terminal. For `\showbox` and `\showlists`, T_EX displays the information at your terminal only if `\tracingonline` (p. ‘`\tracingonline`’) is greater than zero; if `\tracingonline` is zero or less (the default case), the information is not displayed.

Whenever T_EX encounters a `\show`-type command it stops for interaction. The request for interaction does *not* indicate an error, but it does give you an opportunity to ask T_EX to show you something else. If you don’t want to see anything else, just press `<return>`.

You can control the amount of output produced by `\showbox` by setting `\showboxbreadth` and `\showboxdepth` (p. ‘`\showboxbreadth`’). These parameters respectively have default values of 5 and 3, which is why just five items appear for each box described in the log output below. (The ‘`..etc.`’ indicates additional items within the boxes that aren’t displayed.)

Example:

```
\show a
\show \hbox
\show \medskip
\show &
```

produces in the log:

```
> the letter a.
> \hbox=\hbox.
> \medskip=macro:
->\vskip \medskipamount .
> alignment tab character &.
```

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Example:

```
\showthe\medskipamount
\toks27={\hbox{Joe's\quad\ Diner}}
\showthe\toks27
```

produces in the log:

```
> 6.0pt plus 2.0pt minus 2.0pt.
> \hbox {Joe's\quad \ Diner}.
```

Example:

```
\setbox 3=\vbox{\hbox{A red dog.}\hrule A black cat.}
\showbox 3
```

produces in the log:

```
> \box3=
\vbox(16.23332+0.0)x53.05565
.\hbox(6.94444+1.94444)x46.41675
..\tenrm A
..\glue 3.33333 plus 1.66498 minus 1.11221
..\tenrm r
..\tenrm e
..\tenrm d
..etc.
.\rule(0.4+0.0)x*
.\hbox(6.94444+0.0)x53.05565
..\tenrm A
..\glue 3.33333 plus 1.66498 minus 1.11221
..\tenrm b
..\tenrm l
..\tenrm a
..etc.
```

Example:

```
\vbox{A \hbox
  {formula
    $x \over y\showlists$}}
```

produces in the log:

```
### math mode entered at line 3
\mathord
.\fam1 y
this will be denominator of:
\fraction, thickness = default
\mathord
\.\fam1 x
### restricted horizontal mode entered at line 2
\tenrm f
\tenrm o
\tenrm r
\tenrm m
\kern-0.27779
\tenrm u
\tenrm l
\tenrm a
\glue 3.33333 plus 1.66666 minus 1.11111
spacefactor 1000
### horizontal mode entered at line 1
\hbox(0.0+0.0)x20.0
\tenrm A
\glue 3.33333 plus 1.66498 minus 1.11221
spacefactor 999
### internal vertical mode entered at line 1
prevdepth ignored
### vertical mode entered at line 0
prevdepth ignored
```