# less Terminal pager

**START HERE**

`less <file>`
Open a file

`/<pattern>`
Search forward

`Space` / `b`
Page down / up

`n` / `N`
Next / previous match

`j` / `k`
Line down / up

`F`
Follow growth like tail -f

`g` / `G`
Top / bottom

`q`
Quit

**Input** file or pipe → read → **Buffer** lazy, scrollable → show → **Screen** keys, search, options

## CONCEPTS

less is a pager: it reads lazily, so huge files open at once and you can scroll back, which a plain cat cannot do.

Keys are case sensitive. Many accept a count first: 10j moves 10 lines, 50% jumps halfway.

Press h inside less for the full key summary; the same keys work in man, git log and systemctl.

## MOVING

`Space` / `f`
Forward one screen

`b` Back one screen

`j` / `Enter` Forward one line

`k` / `y` Back one line

`d` Forward half a screen

`u` Back half a screen

`g` / `<` Go to the first line

`G` / `>` Go to the last line

`<n>g` Go to line <n>
*Counts prefix most commands, e.g. 120g.*

`<n>%`
Go to <n> percent into the file

`Right` / `Left`
Scroll sideways half a screen

`ESC-Space`
Forward one screen, past end of file

`z` / `w`
Forward / back one screen, set its size

`r` Repaint the screen

## SEARCHING

`/<pattern>` Search forward

`?<pattern>` Search backward

`n` Next match

`N` Previous match

`&<pattern>`
Show only matching lines
*An empty &<Enter> shows everything again.*

`&!<pattern>`
Show only non-matching lines

`ESC-u`
Toggle match highlighting

`ESC-n`
Next match, continuing into the next file

`/!<pattern>`
Search for lines not matching

`/^K<pattern>`
Highlight matches without moving

`/^R<pattern>`
Search literally, no regex

Searches are regular expressions. With -i they ignore case unless the pattern has capitals.

## MARKS AND JUMPING

`m<letter>` Mark the top line

`M<letter>`
Mark the bottom line

`'<letter>` Jump to a mark

`''`
Jump back to previous position

`'^` / `'$`
Jump to start / end by mark

`{` / `}`
Jump to matching bracket

`t` / `T` Next / previous tag

## FILES AND COMMANDS

`F` Follow the end, like tail -f
*Press Ctrl+C to stop following and scroll again.*

`:n` Next file

`:p` Previous file

`:e` › *<file>* Open another file

`:d`
Remove current file from the list

`=` / `Ctrl` + `G`
Show file name and position

`-<flag>` Toggle an option live
*For example -S or -N; --<name> works too.*

`v` Edit the file in $EDITOR

`!<cmd>`
Run a shell command

`|<mark>` › *<cmd>*
Pipe a range to a shell command

`s` › *<file>*
Save piped input to a file

`h` Show help

`q` Quit

## OPTIONS

`less -S <file>`
Chop long lines instead of wrapping

`less -N <file>`
Show line numbers

`less -R`
Pass ANSI colours through

`less -F`
Quit if it fits on one screen

`less -X`
Do not clear screen on exit

`less -i`
Ignore case when searching

## OPTIONS (cont.)

`less -I`
Ignore case always

`less +F <file>`
Start in follow mode

`less +<n> <file>`
Start at line <n>

`less +/<pattern> <file>`
Start at first match

`less -p <pattern>`
Start at first match

`less -s`
Squeeze blank lines

`less -J`
Show a status column for matches

`less -M`
Verbose prompt with percent

`less -K`
Quit on Ctrl+C

`less -o <log>`
Log piped input to a file

`less <a> <b>`
View several files, :n / :p to switch

`less -x4`
Set tab stops to 4

## RECIPES

**Colour output, then page it**

```
git diff --color=always | less -R
grep -rn --color=always TODO . | less -R
```

**Watch a log, search, resume**

```
less +F /var/log/syslog
# Ctrl+C to stop following
# /error then n to step through hits
# F to follow again
```

**Wide table without wrapping**

```
ps aux | less -S
# Left / Right to scroll sideways
```

**Make options permanent**

```
export LESS='-iRFX'
export PAGER=less
```