

# The pagesel package

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## Abstract

Single pages or page areas can be selected for output.

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\*Please report any issues at <https://github.com/ho-tex/pagesel/issues>

# 1 Usage

The package `pagesel` is a L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> package:

```
\usepackage[options]{pagesel}
```

(For plainT<sub>E</sub>X and L<sup>A</sup>T<sub>E</sub>X 2.09 the similar package `selectp`<sup>1</sup> from Donald Arsenau<sup>2</sup> can be used.)

Depending on the options the package works in two modes:

1. If no page selecting option is present, so the package ignores the other options and finishes itself. So no page will be suppressed by the package and auxiliary files will be written.
2. With at least one page selecting option the specified pages are selected and the other are suppressed. The default for this mode is that auxiliary will not be overwritten. (This can be changed by an option.)

## 1.1 Page selecting

The package `pagesel` sets up a new counter that is incremented by each `\shipout`. In this way the package counts the output pages regardless the value of the page counter. So each page can individually be addressed, even if there are several pages with the same page number.

### 1.1.1 Options for selecting pages

**odd:** The output pages must have an odd number. All even output pages are suppressed. If there are no page areas specified so all odd pages are print. With page areas only the odd pages in this areas are selected.

**even:** The opposite of option `odd`.

**Page area:** A page area consists of three elements: the starting output page number, an “area” hyphen, and the output page number of the last page in this area. Each component is optional, so there are four kinds to specify a page area:

`<m>-<n>`: All pages between `<m>` and `<n>` inclusive.

`-<n>`: All pages until `<n>` inclusive.

`<m>-`: The page area starts with `<m>` and all pages to the end of document are selected.

`-`: All pages (not very useful).

`<s>`: The single page `<s>`.

### 1.1.2 Examples

Options	Output pages
<code>[1, 4, 9]</code>	1, 4, and 9
<code>[7-10, 3]</code>	3, 7, 8, 9, and 10
<code>[odd, 3-6]</code>	3, and 5
<code>[-4, 3, even, 7-8]</code>	2, 4, and 8

<sup>1</sup>Url: <https://ctan.org/pkg/selectp>

<sup>2</sup>Donald Arsenau’s email address: [asnd@triumf.ca](mailto:asnd@triumf.ca)

## 1.2 Auxiliary files

If a page is suppressed, the `\write` commands are not performed. Labels, index entries, or entries for the table of contents aren't written. So it is likely that the table of contents, registers, and lists are incomplete.

### 1.2.1 Options for handling auxiliary files

**nofiles:** This is the default. Auxiliary files are read but not written or changed. Also the job is aborted after the last selected page for saving time.

**nonofiles/files:** Auxiliary files are written.

### 1.2.2 Package hyperref

In old versions of `hyperref` [1999/04/12 v6.55] (and below) there is a bug with `\nofiles`:

- Some “garbage” appears on terminal and in the log file. This is harmless and can be ignored.
- The outline auxiliary file `\jobname.out`, however, is opened and truncated to zero bytes. Version 1.0 of this package had loaded a patch file `hynnofil.tex`, if it detects `hyperref` to get `\nofiles` work.

With the new version of `hyperref` [1999/04/13 v6.56] `\nofiles` works now. Therefore the workaround code is no longer needed and removed.

## 2 Implementation

```
1 <*package>
```

### 2.1 New implementation using the LaTeX kernel hooks

```
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pagesel}
4 [2020-08-03 v1.10 Select pages of a document for output (H0)]%
5 \providecommand\IfFormatAtLeastTF{\@ifl@t@r\fmtversion}
6 \IfFormatAtLeastTF{2020/10/01}{-}{\input{pagesel-2016-05-16.sty}}
7 \IfFormatAtLeastTF{2020/10/01}{-}{\endinput}
8
```

If the package is loaded twice, the package code does not work. So stop loading the package, if it is already loaded.

```
9 \@ifundefined{ps@oddpages}{-}{%
10 \PackageWarningNoLine{pagesel}{Package already loaded.}%
11 \endinput
12 }
13 </package>
```

### 2.2 Package

```
14 <*packagefrozen>
15 \NeedsTeXFormat{LaTeX2e}
16 \ProvidesPackage{pagesel}
17 [2020-08-03 v1.10 Select pages of a document for output (legacy code) (H0)]%
18 \@ifundefined{ps@makevoid}{-}{%
19 \endinput
20 }
21 </packagefrozen>
```

If the package is loaded twice, the package code does not work. So stop loading the package, if it is already loaded.

```

19 \PackageWarningNoLine{pagesel}{Package already loaded.}%
20 \endinput
21 }

\ps@makevoid Macro \ps@makevoid clears the output box. Because nothing is shipped out and
this is intended, we reduce the counter \deadcycles in order to avoid problems,
if more than \maxdeadcycles pages are omitted.

22 \newcommand*\ps@makevoid{%
23 \global\setbox\@cclv\copy\voidb@x
24 \begingroup
25 \count@=\deadcycles
26 \advance\count@ by -1\relax
27 \deadcycles=\count@
28 \endgroup
29 }
30 </packagefrozen>

\ps@oddpages
31 (*package | packagefrozen)
32 \newcommand*\ps@oddpages{0}
33 \DeclareOption{odd}{\renewcommand*\ps@oddpages{1}}
34 \DeclareOption{even}{\renewcommand*\ps@oddpages{2}}

35 \DeclareOption{nofiles}{\let\ps@nofiles\nofiles}
36 \DeclareOption{nonofiles}{\let\ps@nofiles@empty}
37 \DeclareOption{files}{\let\ps@nofiles@empty}
38 \ExecuteOptions{nofiles}

39 \DeclareOption*{%
40 \begingroup
41 \expandafter\ps@checkoption\CurrentOption-\END
42 \edef\x{\endgroup\noexpand\ps@store{\ps@first}{\ps@last}}%
43 \x
44 }

\ps@checkoption
45 \newcommand\ps@checkoption{}
46 \def\ps@checkoption#1-#2\END{%
47 \ifx\#2\%
48 \ifx\#1\%
49 % empty option
50 \def\ps@first{\maxdimen}%
51 \def\ps@last{\maxdimen}%
52 \else
53 \edef\ps@first{#1}%
54 \edef\ps@last{#1}%
55 \fi
56 \else
57 \ifx\#1\%
58 \def\ps@first{-\maxdimen}%
59 \else
60 \edef\ps@first{#1}%
61 \fi
62 \ps@checklast#2%
63 \fi
64 }

\ps@checklast
65 \newcommand\ps@checklast{}

```

```

66 \def\ps@checklast#1-{%
67   \ifx\#1\%
68     \def\ps@last{\maxdimen}%
69   \else
70     \edef\ps@last{#1}%
71   \fi
72 }

\ps@store
73 \newcommand*\ps@store}[2]{%
74   \expandafter\def\expandafter\ps@testlist\expandafter{%
75     \ps@testlist\ps@pagetest{#1}{#2}%
76   }%
77 }

\ps@testlist
78 \newcommand*\ps@testlist{}

79 \ProcessOptions
80 \begingroup
81   \edef\x{%
82     \ifnum\ps@oddpages>0 \relax\fi
83     \ifx\ps@testlist\@empty\else\relax\fi
84   }%
85   \ifx\x\@empty
86     \endgroup
87     \PackageInfo{pagesel}{Nothing to do}%
88     \expandafter\endinput
89   \fi
90 \endgroup

91 </package | packagefrozen>
92 <*packagefrozen>
93 \RequirePackage{everyshi}
94 </packagefrozen>

95 <*package | packagefrozen>
96 \ps@nofiles

\c@ps@count
97 \newcounter{ps@count}
98 \setcounter{ps@count}{0}

\ps@ReturnAfterElseFi
\ps@ReturnAfterFi
99 \long\def\ps@ReturnAfterElseFi#1\else#2\fi{\fi#1}
100 \long\def\ps@ReturnAfterFi#1\fi{\fi#1}

101 \newcommand{\ps@lastpage}{\maxdimen}
102 \ifx\ps@nofiles\nofiles
103   \ifx\ps@testlist\@empty
104     \else
105       \def\ps@lastpage{0}%
106       \newcommand*\ps@pagetest}[2]{%
107         \ifnum#2>\ps@lastpage\relax
108         \def\ps@lastpage{#2}%
109       \fi
110     }%
111     \ps@testlist
112     \let\ps@pagetest\relax

```

```

113 \fi
114 \fi

\ps@ifinset
115 \newcommand*\ps@ifinset}[4]{%
116 \ifnum#1>\value{ps@count}%
117 \ps@ReturnAfterElseFi{#4}%
118 \else
119 \ps@ReturnAfterFi{%
120 \ifnum#2<\value{ps@count}%
121 \ps@ReturnAfterElseFi{#4}%
122 \else
123 \ps@ReturnAfterFi{#3}%
124 \fi
125 }%
126 \fi
127 }

\ps@pagetest
128 \newcommand*\ps@pagetest}[2]{%
129 \ps@ifinset{#1}{#2}{\let\ps@next\@empty}{}%
130 }

131 </package | packagefrozen>
132 <packagefrozen>\EveryShipout{%
133 <package>\AddToHook{shipout/before}{%
134 (*package | packagefrozen)
135 \stepcounter{ps@count}%
136 \ifnum\value{ps@count}>\ps@lastpage\relax
137 \global\output{%
138 \ps@cleanup@if
139 \ps@group@message
140 \typeout{%
141 Package pagesel Notice: Aborting LaTeX job %
142 after last selected page (\ps@lastpage).%
143 }%
144 \ps@message@ignore
145 \global\setbox\@cclv\box\voidb@x
146 \deadcycles0\relax

First leave the output group before ending the job.
147 \aftergroup\@end
148 }%
149 \fi
150 \let\ps@next\@empty
151 \ifx\ps@testlist\@empty
152 \else
153 <packagefrozen> \let\ps@next\ps@makevoid
154 <package> \let\ps@next\DiscardShipoutBox
155 \ps@testlist
156 \fi
157 \ifnum\ps@oddpages=1 %
158 \ifodd\value{ps@count}%
159 \else
160 <packagefrozen> \let\ps@next\ps@makevoid
161 <package> \let\ps@next\DiscardShipoutBox
162 \fi
163 \fi
164 \ifnum\ps@oddpages=2 %

```

```

165 \ifodd\value{ps@count}%
166 <packagefrozen> \let\ps@next\ps@makevoid
167 <package> \let\ps@next\DiscardShipoutBox
168 \else
169 \fi
170 \fi
171 <packagefrozen> \ps@begindvi
172 \ps@next
173 }
174 </package | packagefrozen>

175 <*package | packagefrozen>
176 <packagefrozen>\begingroup\expandafter\expandafter\expandafter\endgroup
177 <packagefrozen>\expandafter\ifx\csname currentiflevel\endcsname\relax
178 <packagefrozen> \let\ps@cleanup@if\@empty
179 <packagefrozen>\else
180 \def\ps@cleanup@if{%
181 \ifnum\currentiflevel>\@ne
182 \csname fi\endcsname
183 \expandafter\ps@cleanup@if
184 \fi
185 }%
186 <packagefrozen>\fi

```

Because of `\aftergroup` it is too dangerous to perform a similar cleanup for groups.

```

187 <packagefrozen> \begingroup\expandafter\expandafter\expandafter\endgroup
188 <packagefrozen> \expandafter\ifx\csname currentgrouplevel\endcsname\relax
189 <packagefrozen> \let\ps@group@message\@empty
190 <packagefrozen> \def\ps@message@ignore{%
191 <packagefrozen> \typeout{%
192 <packagefrozen> (pagesel) \space\space\@spaces\@spaces\@spaces
193 <packagefrozen> Messages (\string\end\space occurred ...) can be ignored.%
194 <packagefrozen> }%
195 <packagefrozen> }%
196 <packagefrozen>\else
197 \def\ps@group@message{%
198 \ifnum\currentgrouplevel>\@ne
199 \def\ps@message@ignore{%
200 \typeout{%
201 (pagesel) \space\space\@spaces\@spaces\@spaces
202 Message (\string\end\space occurred ...) %
203 can be ignored.%
204 }%
205 }%
206 \else
207 \let\ps@message@ignore\@empty
208 \fi
209 }%
210 <packagefrozen>\fi
211 </package | packagefrozen>

```

## 2.3 AtBeginDvi hook support

The material of box `\@begindvibox` is recorded in parallel in box `\ps@begindvibox`.

```

212 <*packagefrozen>
213 \newbox\ps@begindvibox
214 \ifvoid\@begindvibox
215 \else

```

```

216 \global\setbox\ps@beginvibox\vbox{%
217 \unvbox\@beginvibox
218 }%
219 \fi
220 \let\ps@org@AtBeginDvi\AtBeginDvi
221 \def\AtBeginDvi#1{%
222 \global\setbox\ps@beginvibox\vbox{%
223 \unvbox\ps@beginvibox
224 #1%
225 }%
226 \ps@org@AtBeginDvi{#1}%
227 }

```

`\ps@beginvibox` Macro `\ps@beginvibox` is called the similar way as `\@beginvibox`. If the first page is printed, then `\AtBeginDvi` should work as usual. Otherwise the contents of box `\ps@beginvibox` is set on the first selected page.

```

228 \def\ps@beginvibox{%
229 \ifx\ps@next\@empty
230 \global\let\ps@beginvibox\@empty
231 \else
232 \global\let\ps@beginvibox\ps@beginvibox@do
233 \fi
234 }
235 \def\ps@beginvibox@do{%
236 \ifx\ps@next\@empty
237 \setbox\@cclv\vbox{%
238 \unvbox\ps@beginvibox
239 \box\@cclv
240 }%
241 \global\let\ps@beginvibox\@empty
242 \fi
243 }
244 </packagefrozen>

```

## 3 Installation

### 3.1 Download

**Package.** This package is available on CTAN<sup>3</sup>:

[CTAN:macros/latex/contrib/pagesel/pagesel.dtx](#) The source file.

[CTAN:macros/latex/contrib/pagesel/pagesel.pdf](#) Documentation.

### 3.2 Package installation

**Unpacking.** The `.dtx` file is a self-extracting docstrip archive. The files are extracted by running the `.dtx` through plain  $\TeX$ :

```
tex pagesel.dtx
```

**TDS.** Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

---

<sup>3</sup>[CTAN:pkg/pagesel](#)



```
pagesel.sty → tex/latex/pagesel/pagesel.sty
pagesel.pdf → doc/latex/pagesel/pagesel.pdf
pagesel.dtx → source/latex/pagesel/pagesel.dtx
```

If you have a `docstrip.cfg` that configures and enables `docstrip`'s TDS installing feature, then some files can already be in the right place, see the documentation of `docstrip`.

### 3.3 Refresh file name databases

If your  $\text{\TeX}$  distribution ( $\text{\TeX}$  Live,  $\text{\MiKTeX}$ , ...) relies on file name databases, you must refresh these. For example,  $\text{\TeX}$  Live users run `texhash` or `mktexlsr`.

### 3.4 Some details for the interested

**Unpacking with  $\text{\LaTeX}$ .** The `.dtx` chooses its action depending on the format:

**plain  $\text{\TeX}$ :** Run `docstrip` and extract the files.

**$\text{\LaTeX}$ :** Generate the documentation.

If you insist on using  $\text{\LaTeX}$  for `docstrip` (really, `docstrip` does not need  $\text{\LaTeX}$ ), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{pagesel.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

**Generating the documentation.** You can use both the `.dtx` or the `.drv` to generate the documentation. The process can be configured by the configuration file `ltxdoc.cfg`. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with `pdf $\text{\LaTeX}$` :

```
pdflatex pagesel.dtx
makeindex -s gind.ist pagesel.idx
pdflatex pagesel.dtx
makeindex -s gind.ist pagesel.idx
pdflatex pagesel.dtx
```

## 4 History

[1999/03/01 v0.9]

- The first version was built as a response to a question of Dirk Kuypers<sup>4</sup>, published in the newsgroup `de.comp.text.tex`:  
“`Re: pdflatex nur fuer bestimmte Seiten?!?`”<sup>5</sup>

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<sup>4</sup>Dirk Kuypers's email address: `dk@comnets.rwth-aachen.de`

<sup>5</sup>Url: <https://groups.google.com/group/de.comp.text.tex/msg/6b68c7b3439fb658>

**[1999/04/05 v1.0]**

- Documentation added in dtx format.
- Copyright: LPPL ([CTAN:macros/latex/base/lppl.txt](#))
- Options odd, even added.
- `\nofiles` added, bug fix for `hyperref`.
- Abort loading of package, if nothing to do.

**[1999/04/13 v1.1]**

- `\nofiles` bug fix removed because of `hyperref` 6.55.
- First CTAN release.

**[2003/06/05 v1.2]**

- `\deadcycles` is decremented for omitted pages.
- LPPL 1.2.

**[2006/02/20 v1.3]**

- Code is not changed.
- New DTX framework.
- LPPL 1.3

**[2006/03/02 v1.4]**

- Support for `\AtBeginDvi` added.

**[2006/03/07 v1.5]**

- Job is aborted after last selected page.

**[2007/04/11 v1.6]**

- Line ends sanitized.

**[2007/04/12 v1.7]**

- Hard coded box number 255 replaced by macro `\@cc1v`.

**[2008/08/11 v1.8]**

- Code is not changed.
- URL updated from [www.dejanews.com](http://www.dejanews.com) to [groups.google.com](http://groups.google.com).

**[2016/05/16 v1.9]**

- Documentation updates.

[2020-08-03 v1.10]

- Updated to follow the changes in the hook management of LaTeX 2020/10/01

## 5 Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; plain numbers refer to the code lines where the entry is used.

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