

# The pdfscape package

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## Abstract

Package `pdfscape` adds PDF support to the environment `landscape` of package `lscape` by setting the PDF page attribute `/Rotate`.

## Contents

<b>1</b>	<b>Documentation</b>	<b>2</b>
1.1	Supported drivers	2
1.2	Caveat	2
1.3	Requirements	2
1.4	Usage	2
<b>2</b>	<b>Implementation</b>	<b>2</b>
2.1	Package identification	2
2.2	Driver options	2
2.3	Autodetection of driver	3
2.3.1	Driver <code>pdftex</code>	3
2.3.2	Driver <code>xetex</code>	3
2.3.3	Detect driver based on <code>\Gin@driver</code>	4
2.3.4	Driver <code>dvips</code>	4
2.4	Driver implementation	4
2.4.1	<code>pdfTeX</code>	4
2.4.2	PostScript driver	5
2.4.3	Driver <code>dvipdfm</code>	5
2.5	Driver independent stuff	6
<b>3</b>	<b>Test</b>	<b>7</b>
3.1	Driver detection tests	7
3.2	Test for <code>\PLS@CheckAngle</code>	7
3.3	Test for rotate	8
<b>4</b>	<b>Installation</b>	<b>10</b>
4.1	Download	10
4.2	Bundle installation	10
4.3	Package installation	10
4.4	Refresh file name databases	11
4.5	Some details for the interested	11
<b>5</b>	<b>History</b>	<b>11</b>
	[2001/01/15 v0.1]	11
	[2001/02/04 v0.2]	11
	[2004/05/11 v0.3]	11
	[2004/05/12 v0.4]	12
	[2006/02/20 v0.5]	12
	[2006/04/24 v0.6]	12

[2007/04/11 v0.7]	12
[2007/04/17 v0.8]	12
[2007/10/21 v0.9]	12
[2008/08/11 v0.10]	12

## 6 Index 12

# 1 Documentation

## 1.1 Supported drivers

- pdftex
- dvips, dvipsone, pctex32, pctexps (and other drivers that provide a non-empty `\Gin@PS@raw`)
- dvipdfm

## 1.2 Caveat

Depending on the configuration Ghostscript adds a guessed rotation entry by its own. This can lead to two `/Rotate` entries per page. To prevent this behaviour set the parameter `AutoRotatePages` to `/None`, eg:

```
ps2pdf -dAutoRotatePages=/None
```

## 1.3 Requirements

- The package `lscape`.
- The package `atbegshi` for all drivers except `pdftex`.

## 1.4 Usage

Load this package instead of or after package `lscape`:

```
\usepackage{pdfscape}
\begin{landscape}...\end{landscape}
```

# 2 Implementation

## 2.1 Package identification

```
1 (*package)
```

Package identification.

```
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pdfscape}%
4 [2008/08/11 v0.10 Landscape pages in PDF (H0)]
```

## 2.2 Driver options

```
5 \let\PLS@option\@empty
6 \let\PLS@driver\@empty
7 \def\PLS@temp#1#2{%
8   \DeclareOption{#1}{%
9     \let\PLS@option\CurrentOption
10    \def\PLS@driver{#2}%
11  }%
12 }
13 \PLS@temp{pdftex}{pdftex}
14 \PLS@temp{dvips}{dvips}
```

```

15 \PLS@temp{dvipsone}{dvips}
16 \PLS@temp{pctexps}{dvips}
17 \PLS@temp{dvipdfm}{dvipdfm}
18 \PLS@temp{dvipdfmx}{dvipdfm}
19 \PLS@temp{xetex}{dvipdfm}
20 \let\PLS@temp\@empty
21 \DeclareOption*{%
22   \ifx\PLS@temp\@empty
23     \let\PLS@temp\CurrentOption
24   \else
25     \edef\PLS@temp{\PLS@temp,\CurrentOption}%
26   \fi
27 }
28 \ProcessOptions*
29 \ifx\PLS@option\@empty
30 \else
31   \expandafter\PassOptionsToPackage\expandafter{\PLS@option}{lscap}%
32 \fi
33 \ifx\PLS@temp\@empty
34 \else
35   \expandafter\PassOptionsToPackage\expandafter{\PLS@temp}{lscap}%
36 \fi
37 \RequirePackage{lscap}

```

## 2.3 Autodetection of driver

### 2.3.1 Driver pdfTeX

```

38 \RequirePackage{ifpdf}[2006/02/20]
39 \def\PLS@temp{pdfTeX}
40 \ifpdf
41   \ifx\PLS@driver\@empty
42     \let\PLS@driver\PLS@temp
43     \PackageInfo{pdfscape}{Auto-detected driver: \PLS@temp}%
44   \fi
45   \ifx\PLS@driver\PLS@temp
46   \else
47     \PackageError{pdfscape}{%
48       The driver option ‘\PLS@option’ is not compatible\MessageBreak
49       with pdfTeX in PDF mode, using driver ‘pdfTeX’ instead%
50     }\@ehc
51     \let\PLS@driver\PLS@temp
52   \fi
53 \fi

```

### 2.3.2 Driver xetex

```

54 \RequirePackage{ifxetex}%
55 \def\PLS@temp{dvipdfm}
56 \ifxetex
57   \ifx\PLS@driver\@empty
58     \let\PLS@driver\PLS@temp
59     \PackageInfo{pdfscape}{%
60       Auto-detected driver: \PLS@temp\space(xetex)%
61     }%
62   \fi
63   \ifx\PLS@driver\PLS@temp
64   \else
65     \PackageError{pdfscape}{%
66       The driver option ‘\PLS@option’ is not compatible\MessageBreak
67       with XeTeX, using driver for XeTeX (dvipdfm) instead%
68     }\@ehc
69     \let\PLS@driver\PLS@temp
70   \fi
71 \fi

```

### 2.3.3 Detect driver based on \Gin@driver

```
72 \def\PLS@temp#1#2{%
73   \ifx\PLS@driver\@empty
74     \begingroup
75       \def\PLS@temp{#1.def}%
76     \expandafter\endgroup
77     \ifx\PLS@temp\Gin@driver
78       \def\PLS@driver{#2}%
79       \PackageInfo{pdflscape}{%
80         Auto-detected driver: \PLS@driver\space(#1)%
81       }%
82     \fi
83   \fi
84 }
85 \PLS@temp{dvipdfm}{dvipdfm}
86 \PLS@temp{dvipdfmx}{dvipdfm}
87 \PLS@temp{dvips}{dvips}
88 \PLS@temp{dvipsone}{dvips}
89 \PLS@temp{pctexp}{dvips}
```

### 2.3.4 Driver dvips

```
90 \ifx\PLS@driver\@empty
91   \def\PLS@temp{dvips}%
92   \ifnum 1=0\ifx\Gin@PS@raw\@undefined
93     \else
94       \ifx\Gin@PS@raw\relax
95       \else
96         \ifx\Gin@PS@raw\@empty
97         \else
98           1%
99         \fi
100       \fi
101     \fi
102     \space
103     \let\PLS@driver\PLS@temp
104     \PackageInfo{pdflscape}{%
105       Auto-detected driver: \PLS@temp\space(PostScript)%
106     }%
107   \fi
108 \fi
109 \ifx\PLS@driver\@empty
110   \PackageError{pdflscape}{%
111     Neither pdfTeX, PostScript, nor dvipdfm driver found%
112   }\@ehc
113 \fi
```

## 2.4 Driver implementation

- \PLS@AddRotate #1  
it expects the correct rotation number in #1 and implements the adding of the /Rotation entry in the /Page object of the current page.
- \PLS@RemoveRotate  
it removes a previous /Rotate entry, if necessary.

### 2.4.1 pdfTeX

Not too nice is the global setting of \pdfpageattr. Perhaps this can be changed in future versions.

```
114 \def\PLS@temp{pdftex}
115 \ifx\PLS@temp\PLS@driver
116   \def\PLS@AddRotate#1{%
```

```
117 \ifnum#1=0 %
```

Already the default.

```
118 \else
119 \global\pdfpageattr\expandafter{%
120 \the\pdfpageattr
121 /Rotate #1%
122 }%
123 \fi
124 }%
```

Removes a /Rotate entry.

```
125 \def\PLS@RemoveRotate{%
126 \begingroup
127 \global\pdfpageattr\expandafter{\expandafter}%
128 \expandafter\PLS@@RemoveRotate
129 \the\pdfpageattr /Rotate\@nil
130 \endgroup
131 }%
132 \def\PLS@@RemoveRotate#1/Rotate#2\@nil{%
```

Append /Rotate free stuff to \pdfpageattr.

```
133 \global\pdfpageattr\expandafter{\the\pdfpageattr#1}%
134 \ifx\#2\%
```

Ready, because the detected /Rotate is part of the end marker: /Rotate\@nil

```
135 \else
```

First read in the argument of /Rotate, then continue parsing.

```
136 \afterassignment\PLS@@RemoveRotate
137 \count0=#2\@nil
138 \fi
139 }%
140 \fi
```

## 2.4.2 PostScript driver

```
141 \def\PLS@temp{dvips}
142 \ifx\PLS@temp\PLS@driver
143 \RequirePackage{atbegshi}%
144 \AtBeginShipout{\PLS@AtBeginShipout}%
145 \let\PLS@AtBeginShipout\@empty
146 \def\PLS@AddRotate#1{%
147 \ifnum#1=0 %
148 \else
149 \def\PLS@AtBeginShipout{%
150 \global\setbox\AtBeginShipoutBox\vbox{%
151 \Gin@PS@raw{%
152 [{ThisPage}\string<\string</Rotate #1\string>\string>%
153 /PUT pdfmark%
154 }%
155 \box\AtBeginShipoutBox
156 }%
157 }%
158 \fi
159 }%
160 \def\PLS@RemoveRotate{\let\PLS@AtBeginShipout\@empty}%
161 \fi
```

## 2.4.3 Driver dvipdfm

```
162 \def\PLS@temp{dvipdfm}
163 \ifx\PLS@temp\PLS@driver
164 \RequirePackage{atbegshi}%
165 \AtBeginShipout{\PLS@AtBeginShipout}%

```

```

166 \let\PLS@AtBeginShipout\@empty
167 \def\PLS@AddRotate#1{%
168   \ifnum#1=0 %
169   \else
170     \def\PLS@AtBeginShipout{%
171       \global\setbox\AtBeginShipoutBox\vbox{%
172         \special{pdf: put @thispage <</Rotate #1>>}}%
173       \box\AtBeginShipoutBox
174     }%
175   }%
176 \fi
177 }%
178 \def\PLS@RemoveRotate{\let\PLS@AtBeginShipout\@empty}%
179 \fi

```

## 2.5 Driver independent stuff

The landscape environment is extended by adding the correct `/Rotate` entries.

```

180 \g@addto@macro{\landscape}{\PLS@Rotate{90}}
181 \g@addto@macro{\endlandscape}{\PLS@Rotate{0}}

```

**\PLS@Rotate** Main macro, that sets the `/Rotate` entry.  
Argument: any TeX number or nothing, that means zero.  
Driver independent.

```

182 \def\PLS@Rotate#1{%
183   \begingroup
184   1. Check and validate the argument.
185   \PLS@CheckAngle{#1}%
186   \expandafter\endgroup
187   2. Remove previous \Rotate entry.
188   \expandafter\PLS@RemoveRotate
189   3. Add /Rotate entry.
190   \expandafter\PLS@AddRotate\expandafter{\the\count@}%
191 }

```

**\PLS@CheckAngle** Validates the rotation angle.  
The result is stored in the count register `\count@`.  
Driver independent.

```

189 \def\PLS@CheckAngle#1{%
190   \ifx\#1\%
191     \count@=0 %
192   \else
193     \count@=#1\relax
194   \fi
195   Normalize to interval  $-360 < \text{\count@} < 360$ .
196   \@whilenum\count@>359\do{\advance\count@ -360 }%
197   \@whilenum\count@<-359\do{\advance\count@ 360 }%
198   Check values: 0, +/-90, +/-180, +/-270
199   \ifnum 1=0\ifnum\count@=0 \else
200     \ifnum\count@=90 \else
201     \ifnum\count@=-90 \else
202     \ifnum\count@=180 \else
203     \ifnum\count@=-180 \else
204     \ifnum\count@=270 \else
205     \ifnum\count@=-270 \else
206     1\fi\fi\fi\fi\fi\fi\fi\relax
207   \PackageError{pdflscape}{%
208     Invalid value \the\count@\space for /Rotate%

```

```

207     }\@ehc
208     \count@=0 %
209     \fi
210 }

211 </package>

```

## 3 Test

### 3.1 Driver detection tests

```

212 <*test0>
213 \NeedsTeXFormat{LaTeX2e}
214 \documentclass{minimal}
215 \usepackage{qstest}
216 \IncludeTests{*}
217 \LogTests{log}{*}{*}
218 </test0>

219 <*test1>
220 \usepackage{ifpdf}
221 \ifpdf
222   \def\ExpectDriver{pdftex}%
223 \fi
224 \usepackage{ifxetex}%
225 \ifxetex
226   \def\ExpectDriver{dvipdfm}%
227 \fi
228 \usepackage{pdfscape}[2008/08/11]
229 </test1>

230 <*test2>
231 \def\ExpectDriver{pdftex}
232 \usepackage[pdftex]{pdfscape}[2008/08/11]
233 </test2>

234 <*test3>
235 \def\ExpectDriver{dvipdfm}
236 \usepackage[dvipdfm]{pdfscape}[2008/08/11]
237 </test3>

238 <*test4>
239 \def\ExpectDriver{dvips}
240 \usepackage[dvipson]{graphics}
241 \usepackage{pdfscape}[2008/08/11]
242 </test4>

243 <*test0>
244 \begin{document}
245 \begin{qstest}{driver}{driver}
246   \makeatletter
247   \Expect*{\PLS@driver}*\ExpectDriver}%
248 \end{qstest}
249 \end{document}
250 </test0>

```

### 3.2 Test for \PLS@CheckAngle

```

251 <*test5>
252 \NeedsTeXFormat{LaTeX2e}
253 \documentclass{minimal}
254 \usepackage{qstest}
255 \IncludeTests{*}
256 \LogTests{log}{*}{*}
257 \usepackage{pdfscape}[2008/08/11]
258 \begin{document}

```

```

259 \begin{qstest}{checkangle}{checkangle}
260 \makeatletter
261 \def\Result{%
262   \def\ResultString{\the\count@}%
263 }%
264 \def\PackageError#1#2#3{%
265   \def\Result{%
266     \def\ResultString{error}%
267   }%
268 }%
269 \def\Test#1#2{%
270   \begin{group}
271     \PLS@CheckAngle{#1}%
272     \Result
273     \Expect*{\ResultString}{#2}%
274   \end{group}
275 }%
276 \Test{0}{0}%
277 \Test{90}{90}%
278 \Test{180}{180}%
279 \Test{270}{270}%
280 \Test{360}{0}%
281 \Test{450}{90}%
282 \Test{540}{180}%
283 \Test{630}{270}%
284 \Test{720}{0}%
285 \Test{3600}{0}%
286 \Test{3690}{90}%
287 \Test{-90}{270}%
288 \Test{-180}{180}%
289 \Test{-270}{-90}%
290 \Test{-360}{0}%
291 \Test{-450}{270}%
292 \Test{540}{180}%
293 \Test{-630}{90}%
294 \Test{-720}{0}%
295 \Test{-3600}{0}%
296 \Test{-3690}{270}%
297 \Test{1}{error}%
298 \Test{-1}{error}%
299 \Test{123}{error}%
300 \end{qstest}
301 \end{document}
302 \end{test5}

```

### 3.3 Test for rotate

```

303 (*test6)
304 \NeedsTeXFormat{LaTeX2e}
305 \documentclass{article}
306 \usepackage{pdfscape}[2008/08/11]
307 \begin{document}
308 \section{Portrait page}
309 \begin{landscape}
310 \section{Landscape page}
311 Foo bar foo bar foo bar foo bar foo bar
312 foo bar foo bar foo bar foo bar foo bar.
313 \end{landscape}
314 \section{Portrait Section}
315 Foo bar
316 \begin{landscape}
317 \section{Again Landscape Section}
318 \newpage

```



```

319 \section{Second Page of Landscape Section}
320 \end{landscape}
321 \section{Second Last Portrait Page}
322 \newpage
323 \section{Last Portrait Page}
324 \end{document}
325 \end{test6}

326 (*result6)
327 /Page 1 /Rotate 0
328 /Page 2 /Rotate 90
329 /Page 3 /Rotate 0
330 /Page 4 /Rotate 90
331 /Page 5 /Rotate 90
332 /Page 6 /Rotate 0
333 /Page 7 /Rotate 0
334 \end{result6}

335 (*ExtractRotate)
336 /**
337  * ExtractRotate.java
338  *
339  * Copyright (C) 2007 by Heiko Oberdiek <heiko.oberdiek at gmail.com>
340  *
341  * Requires: PDFBox (http://www.pdfbox.org/)
342  *
343  * Syntax: java ExtractRotate <pdffile> <textfile>
344  *
345  * The <pdffile> is analyzed and for each page its rotation
346  * setting is printed in the <textfile>. Example:
347  *   /Page 1 /Rotate 0
348  *   /Page 2 /Rotate 90
349  */
350 import java.io.FileInputStream;
351 import java.io.FileWriter;
352 import org.pdfbox.pdfparser.PDFParser;
353 import org.pdfbox.pdmodel.PDDocument;
354 import org.pdfbox.pdmodel.PDDocumentCatalog;
355 import org.pdfbox.pdmodel.PDPage;
356
357 public class ExtractRotate {
358
359     public static void main(String[] args) {
360         try {
361             String infile = args[0];
362             String outfile = args[1];
363             FileWriter out = new FileWriter(outfile);
364             PDFParser parser =
365                 new PDFParser(new FileInputStream(infile));
366             parser.parse();
367             PDDocument document = parser.getPDDocument();
368             PDDocumentCatalog catalog = document.getDocumentCatalog();
369             int i = 0;
370             for (Object page: catalog.getAllPages()) {
371                 i++;
372                 out.write("/Page " + i + " " + "/Rotate "
373                     + ((PDPage)page).findRotation() + "\n");
374             }
375             document.close();
376             out.close();
377         }
378         catch (Exception e) {
379             e.printStackTrace();
380             System.exit(1);

```

```

381     }
382   }
383 }
384 </ExtractRotate>

```

## 4 Installation

### 4.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

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

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

**Bundle.** All the packages of the bundle ‘oberdiek’ are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

[CTAN:install/macros/latex/contrib/oberdiek.tds.zip](#)

*TDS* refers to the standard “A Directory Structure for T<sub>E</sub>X Files” ([CTAN:tds/tds.pdf](#)). Directories with `texmf` in their name are usually organized this way.

### 4.2 Bundle installation

**Unpacking.** Unpack the `oberdiek.tds.zip` in the TDS tree (also known as `texmf` tree) of your choice. Example (linux):

```
unzip oberdiek.tds.zip -d ~/texmf
```

**Script installation.** Check the directory `TDS:scripts/oberdiek/` for scripts that need further installation steps. Package `attachfile2` comes with the Perl script `pdfatfi.pl` that should be installed in such a way that it can be called as `pdfatfi`. Example (linux):

```

chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/

```

### 4.3 Package installation

**Unpacking.** The `.dtx` file is a self-extracting `docstrip` archive. The files are extracted by running the `.dtx` through plain T<sub>E</sub>X:

```
tex pdflscape.dtx
```

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

```

pdflscape.sty      → tex/latex/oberdiek/pdflscape.sty
pdflscape.pdf      → doc/latex/oberdiek/pdflscape.pdf
test/pdflscape-test1.tex → doc/latex/oberdiek/test/pdflscape-test1.tex
test/pdflscape-test2.tex → doc/latex/oberdiek/test/pdflscape-test2.tex
test/pdflscape-test3.tex → doc/latex/oberdiek/test/pdflscape-test3.tex
test/pdflscape-test4.tex → doc/latex/oberdiek/test/pdflscape-test4.tex
test/pdflscape-test5.tex → doc/latex/oberdiek/test/pdflscape-test5.tex
test/pdflscape-test6.tex → doc/latex/oberdiek/test/pdflscape-test6.tex
test/pdflscape-test6.txt → doc/latex/oberdiek/test/pdflscape-test6.txt
test/ExtractRotate.java → doc/latex/oberdiek/test/ExtractRotate.java
pdflscape.dtx      → source/latex/oberdiek/pdflscape.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`.

<sup>1</sup><http://ftp.ctan.org/tex-archive/>

## 4.4 Refresh file name databases

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

## 4.5 Some details for the interested

**Attached source.** The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk pdfscape.pdf unpack_files output .
```

**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{pdfscape.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 pdfscape.dtx
makeindex -s gind.ist pdfscape.idx
pdflatex pdfscape.dtx
makeindex -s gind.ist pdfscape.idx
pdflatex pdfscape.dtx
```

## 5 History

[2001/01/15 v0.1]

- First public version, published in `de.comp.text.tex`:  
“Re: Querformat, pdf $\text{\LaTeX}$  und thumbpdf”<sup>2</sup>

[2001/02/04 v0.2]

- Minor documentation update.
- CTAN.

[2004/05/11 v0.3]

- Support for `dvipdfm` added.

---

<sup>2</sup>Url: <http://groups.google.com/group/de.comp.text.tex/msg/e054c5795e52d2b8>

## [2004/05/12 v0.4]

- Bug fix: support for multipage landscape environment for all drivers except for pdfTeX.

## [2006/02/20 v0.5]

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

## [2006/04/24 v0.6]

- Bug fix: `\PLS@RemoveRotate` reinserted for `\PLS@Rotate`.
- Fix for `\PLS@RemoveRotate` (dvips/dvipdfm): `\PLS@EverhShi` hook is cleared.

## [2007/04/11 v0.7]

- Line ends sanitized.

## [2007/04/17 v0.8]

- Package `atbegshi` replaces `everyshi`.

## [2007/10/21 v0.9]

- Driver detection for  $\text{\LaTeX}$  added.
- Fix for rotation angles  $\leq -360$  or  $\geq 360$ .

## [2008/08/11 v0.10]

- Code is not changed.
- URLs updated.

## 6 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; numbers in roman refer to the code lines where the entry is used.

Symbols		B	
<code>\@ehc</code>	50, 68, 112, 207	<code>\begin</code>	244, 245, 258, 259, 307, 309, 316
<code>\@empty</code>	5, 6, 20, 22, 29, 33, 41, 57, 73, 90, 96, 109, 145, 160, 166, 178	<code>\box</code>	155, 173
<code>\@nil</code>	129, 132, 137	C	
<code>\@undefined</code>	92	<code>\count</code>	137
<code>\@whilenum</code>	195, 196	<code>\count@</code>	187, 191, 193, 195, 196, 197, 198, 199, 200, 201, 202, 203, 206, 208, 262
<code>\@</code>	134, 190	<code>\CurrentOption</code>	9, 23, 25
A		D	
<code>\advance</code>	195, 196	<code>\DeclareOption</code>	8, 21
<code>\afterassignment</code>	136	<code>\do</code>	195, 196
<code>\AtBeginShipout</code>	144, 165	<code>\documentclass</code>	214, 253, 305
<code>\AtBeginShipoutBox</code>	150, 155, 171, 173		

<b>E</b>	
\end ..	248, 249, 300, 301, 313, 320, 324
\endlandscape .....	181
\Expect .....	247, 273
\ExpectDriver .....	222, 226, 231, 235, 239, 247
<b>G</b>	
\g@addto@macro .....	180, 181
\Gin@driver .....	77
\Gin@PS@raw .....	92, 94, 96, 151
<b>I</b>	
\ifnum .....	92, 117, 147, 168, 197, 198, 199, 200, 201, 202, 203
\ifpdf .....	40, 221
\ifx .....	22, 29, 33, 41, 45, 57, 63, 73, 77, 90, 92, 94, 96, 109, 115, 134, 142, 163, 190
\ifxetex .....	56, 225
\IncludeTests .....	216, 255
<b>L</b>	
\landscape .....	180
\LogTests .....	217, 256
<b>M</b>	
\makeatletter .....	246, 260
\MessageBreak .....	48, 66
<b>N</b>	
\n .....	373
\NeedsTeXFormat .....	2, 213, 252, 304
\newpage .....	318, 322
<b>P</b>	
\PackageError ...	47, 65, 110, 205, 264
\PackageInfo .....	43, 59, 79, 104
\PassOptionsToPackage .....	31, 35
\pdfpageattr ..	119, 120, 127, 129, 133
\PLS@@RemoveRotate ....	128, 132, 136
\PLS@AddRotate ....	116, 146, 167, 187
\PLS@AtBeginShipout .....	144, 145, 149, 160, 165, 166, 170, 178
\PLS@CheckAngle .....	184, 189, 271
\PLS@driver .....	6, 10, 41, 42, 45, 51, 57, 58, 63, 69, 73, 78, 80, 90, 103, 109, 115, 142, 163, 247
\PLS@option .....	5, 9, 29, 31, 48, 66
\PLS@RemoveRotate ..	125, 160, 178, 186
\PLS@Rotate .....	180, 181, 182
\PLS@temp 7, 13, 14, 15, 16, 17, 18, 19,	20, 22, 23, 25, 33, 35, 39, 42, 43, 45, 51, 55, 58, 60, 63, 69, 72, 75, 77, 85, 86, 87, 88, 89, 91, 103, 105, 114, 115, 141, 142, 162, 163
\ProcessOptions .....	28
\ProvidesPackage .....	3
<b>R</b>	
\RequirePackage ..	37, 38, 54, 143, 164
\Result .....	261, 265, 272
\ResultString .....	262, 266, 273
<b>S</b>	
\section 308, 310, 314, 317, 319, 321, 323	
\setbox .....	150, 171
\space .....	60, 80, 102, 105, 206
\special .....	172
<b>T</b>	
\Test ..	269, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299
\the .....	120, 129, 133, 187, 206, 262
<b>U</b>	
\usepackage ....	215, 220, 224, 228, 232, 236, 240, 241, 254, 257, 306
<b>V</b>	
\vbox .....	150, 171