

# The pdfcolparcolumns package

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2010/01/11 v1.3

## Abstract

Since version 1.40 pdfTeX supports several color stacks. This package uses them to fix color problems in package parcolumns.

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# 1 Usage

```
\usepackage{pdfcolparcolumns}
```

The package `pdfcolparcolumns` loads package `parcolumns` [1]. If color stacks are available then the macros of `parcolumns` are patched to add support for color stacks.

## 1.1 Option `rulebetweencolor`

Package `pdfcolparcolumns` also fixes the color for the rule between columns (if `rulebetween` is set). Default color is `\normalcolor`. But this can be changed by using option `rulebetweencolor`. It takes a color specification as value. If the value is empty, then the default (`\normalcolor`) is used. Examples:

```
rulebetweencolor=blue,
rulebetweencolor={red},
rulebetweencolor={}, % \normalcolor is used
rulebetweencolor=[rgb]{1,0,.5} % see below
```

If used inside the optional argument of environment `parcolumns` and the value contains an optional argument, then whole value must be put in curly braces:

```
\begin{parcolumns}[
  rulebetween,
  rulebetweencolor=[rgb]{1,0,.5},
]{2}
...
\end{parcolumns}
```

This option `rulebetweencolor` can also be set using `\setkeys`:

```
\setkeys{parcolumns}{rulebetweencolor=green}
```

## 1.2 Future

Currently package `parcolumns` does not seem to be maintained. Nevertheless if there will be a new version that adds support for color stacks, then this package may become obsolete.

# 2 Implementation

## 2.1 Identification

```
1 (*package)
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pdfcolparcolumns}%
4 [2010/01/11 v1.3 Color stacks support for parcolumns (HO)]%
```

## 2.2 Load packages

### 2.2.1 Package `parcolumns`

Currently package `parcolumns` does not define options. Thus it is just a precaution that the options of package `pdfcolparcolumns` are passed to package `parcolumns`.

```
5 \DeclareOption*{%
6   \PassOptionsToPackage{\CurrentOption}{parcolumns}%
7 }
8 \ProcessOptions\relax
9 \RequirePackage{parcolumns}[2004/11/25]
```

### 2.2.2 Package pdfcol

```
10 \RequirePackage{pdfcol}[2007/09/09]
11 \ifpdfcolAvailable
12 \else
13   \PackageInfo{pdfcolparcolumns}{%
14     Loading aborted, because color stacks are not available%
15   }%
16   \expandafter\endinput
17 \fi
```

### 2.2.3 Package infwarerr

```
18 \RequirePackage{infwarerr}[2007/09/09]
```

## 2.3 Color stack macros

`\pcpc@MaxStack` Macro `\pcpc@MaxStack` holds the highest number of allocated stacks.

```
19 \global\chardef\pcpc@MaxStack=\z@
```

`\pcpc@InitStacks` Macro `\pcpc@InitStacks` takes the number of columns as argument and ensures that there are enough color stacks for all columns.

```
20 \def\pcpc@InitStacks#1{%
21   \ifnum#1>\pcpc@MaxStack
22     \begingroup
23       \count@\pcpc@MaxStack
24       \loop
25         \advance\count@\@ne
26         \pdfcolInitStack{pcpc@\the\count@}%
27       \ifnum#1>\count@
28         \repeat
29       \global\chardef\pcpc@MaxStack=\count@
30     \endgroup
31   \fi
32 }
```

`\pcpc@SwitchStack`

```
33 \def\pcpc@SwitchStack#1{%
34   \pdfcolSwitchStack{pcpc@\number#1}%
35 }
```

`\pcpc@SetCurrent`

```
36 \def\pcpc@SetCurrent#1{%
37   \pdfcolSetCurrent{pcpc@\number#1}%
38 }
```

## 2.4 Patches

Now the color stack macros are patched into the macros of package `parcolumns`.

### 2.4.1 Init stacks

`\pcpc@InitStacks` should go into the definition of environment `parcolumns`. `\pc@allococolumns` is executed there and nowhere else, thus we hook into it.

```
39 \g@addto@macro\pc@allococolumns{%
40   \pcpc@InitStacks\pc@columncount
41 }
```

### 2.4.2 Switch stack

`\pcpc@SwitchStack` should be called by marco `\colchunk@`. However it is easier to patch `\pc@setcolumnwidth` that is executed in `\colchunk@` only.

```
42 \g@addto@macro\pc@setcolumnwidth{%  
43   \pcpc@SwitchStack\pc@columnctr  
44 }
```

### 2.4.3 Set current stack color

`\pcpc@SetCurrent` is set at the begin of each line. It must be inserted into `\pc@placeboxes`. Unhappily there is no easy way. Therefore we check and redefine `\pc@placeboxes`.

```
45 \begingroup  
46   \def\x{%  
47     \global\let\@tempa\relax  
48     \count@\z@  
49     \hb@xt@\linewidth{%  
50       \vfuzz30ex %  
51       \vbadness\@M  
52       \splittopskip\z@skip  
53       \loop  
54       \ifnum\count@<\pc@columncount  
55         \advance\count@\@ne  
56         \expandafter\ifvoid\csname pc@column@\number\count@\endcsname  
57           \hskip\csname pc@column@width@\number\count@\endcsname  
58         \else  
59           \expandafter\setbox\expandafter\@tempboxa\expandafter  
60             \vsplit\csname pc@column@\number\count@\endcsname  
61             to \dp\strutbox  
62           \vbox{%  
63             \unvbox\@tempboxa  
64           }%  
65         \fi  
66         \expandafter\ifvoid\csname pc@column@\number\count@\endcsname  
67         \else  
68           \global\let\@tempa\pc@placeboxes  
69         \fi  
70       \ifnum\count@<\pc@columncount  
71         \strut  
72         \hfill  
73         \ifpc@rulebetween  
74           \vrule  
75           \hfill  
76         \fi  
77       \fi  
78     \repeat  
79   }%  
80   \@tempa  
81 }%  
82 \ifx\x\pc@placeboxes  
83 \else  
84   \@PackageWarningNoLine{pdfcolparcolumns}{%  
85     Command \string\pc@placeboxes\space has changed.\MessageBreak  
86     Supported versions of package ‘parcolumns’:\MessageBreak  
87     \space\space 2004/08/05.\MessageBreak  
88     The redefinition of \string\pc@placeboxes\space may not%  
89     \MessageBreak  
90     behave correctly depending on the changes%  
91   }%  
92 \fi  
93 \endgroup
```

\pc@placeboxes

```

94 \renewcommand*{\pc@placeboxes}{%
95   \global\let\@tempa\relax
96   \count@\z@
97   \hb@xt@\linewidth{%
98     \vfuzz30ex %
99     \vbadness\@M
100    \splittopskip\z@skip
101    \loop
102    \ifnum\count@<\pc@columncount
103      \advance\count@\@ne
104      \expandafter\ifvoid\csname pc@column@\number\count@\endcsname
105      \hskip\csname pc@column@width@\number\count@\endcsname
106      \else
107        \expandafter\setbox\expandafter\@tempboxa\expandafter
108        \vsplit\csname pc@column@\number\count@\endcsname
109        to \dp\strutbox
110        \vbox{%
111          \pcpc@SetCurrent\count@
112          \unvbox\@tempboxa
113        }%
114      \fi
115      \expandafter\ifvoid\csname pc@column@\number\count@\endcsname
116      \else
117        \global\let\@tempa\pc@placeboxes
118      \fi
119      \ifnum\count@<\pc@columncount
120        \strut
121        \hfill
122        \ifpc@rulebetween
123          \begingroup
124            \pcpc@RuleBetweenColor
125            \vrule
126          \endgroup
127          \hfill
128        \fi
129      \fi
130    \repeat
131  }%
132  \@tempa
133 }
```

\pcpc@RuleBetweenColorDefault

```

134 \def\pcpc@RuleBetweenColorDefault{%
135   \normalcolor
136 }
```

\pcpc@RuleBetweenColor

```

137 \let\pcpc@RuleBetweenColor\pcpc@RuleBetweenColorDefault

138 \define@key{parcolumns}{rulebetweencolor}{%
139   \edef\pcpc@temp{#1}%
140   \ifx\pcpc@temp\@empty
141     \let\pcpc@RuleBetweenColor\pcpc@RuleBetweenColorDefault
142   \else
143     \edef\pcpc@temp{%
144       \noexpand\@ifnextchar [{%
145         \def\noexpand\pcpc@RuleBetweenColor{%
146           \noexpand\color\pcpc@temp
147         }%
148         \noexpand\pcpc@GobbleNil
149       }{%

```

```

150      \def\noexpand\pcpc@RuleBetweenColor{%
151      \noexpand\color{\pcpc@temp}%
152      }%
153      \noexpand\pcpc@GobbleNil
154      }%
155      \pcpc@temp\noexpand\@nil
156      }%
157      \pcpc@temp
158      \fi
159 }

```

\pcpc@GobbleNil

```

160 \long\def\pcpc@GobbleNil#1\@nil{}
161 </package>

```

### 3 Test

The test file is a modified version of the file that Donald Goodman has posted in [comp.text.tex](#): “Re: xcolor glitches”<sup>1</sup>

```

162 (*test1)
163 \NeedsTeXFormat{LaTeX2e}
164 \AtEndDocument{%
165   \typeout{%
166     \typeout{*****}%
167     \typeout{*** \space Check the PDF file manually! \space ***}%
168     \typeout{*****}%
169     \typeout{%
170   }
171 \documentclass{article}
172 \usepackage{xcolor}
173 \usepackage{pdfcolparcolumns}
174
175 \newcommand{\instruct}[1]{%
176   \noindent
177   \footnotesize
178   \textcolor{red}{#1}%
179 }
180
181 \begin{document}
182   \begin{parcolumns}[colwidths={1=2.3in,2=2.3in},sloppy]{2}%
183     \colchunk[1]{%
184       \instruct{Et non dicitur versus} %
185       Fidelium anim\ae\ %
186       \instruct{%
187         sed immediate subiungitur antiphona finalis %
188         beat\ae\ Mari\ae\ Virginis%
189       } %
190       100.%
191     }%
192     \colchunk[2]{%
193       \instruct{%
194         And the verse %
195         \textcolor{black}{May the souls of the faithful} %
196         is not said, but the final antiphon of the %
197         Blessed Virgin Mary, %
198         \textcolor{black}{100,} %
199         is immediately joined.%
200       }%
201     }%

```

<sup>1</sup>Url: <http://groups.google.com/group/comp.text.tex/msg/8eda74ed292012bb>

```

202 \end{parcolumns}%
203 \end{document}
204 </test1>

```

## 4 Installation

### 4.1 Download

**Package.** This package is available on CTAN<sup>2</sup>:

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

[CTAN:macros/latex/contrib/oberdiek/pdfcolparcolumns.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 pdfcolparcolumns.dtx
```

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

```

pdfcolparcolumns.sty      → tex/latex/oberdiek/pdfcolparcolumns.sty
pdfcolparcolumns.pdf      → doc/latex/oberdiek/pdfcolparcolumns.pdf
test/pdfcolparcolumns-test1.tex → doc/latex/oberdiek/test/pdfcolparcolumns-test1.tex
pdfcolparcolumns.dtx      → source/latex/oberdiek/pdfcolparcolumns.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`.

### 4.4 Refresh file name databases

If your T<sub>E</sub>X distribution (teT<sub>E</sub>X, mikT<sub>E</sub>X, ...) relies on file name databases, you must refresh these. For example, teT<sub>E</sub>X users run `texhash` or `mktextlsr`.

<sup>2</sup>[ftp://ftp.ctan.org/tex-archive/](http://ftp.ctan.org/tex-archive/)

## 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 pdfcolparcolumns.pdf unpack_files output .
```

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

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

**$\LaTeX$ :** Generate the documentation.

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

```
latex \let\install=y\input{pdfcolparcolumns.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 $\LaTeX$` :

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

## 5 References

- [1] Jonathan Sauer: *The parcolumns package*; 2004/11/25;  
[CTAN:macros/latex/contrib/sauerj/parcolumns.pdf](http://ctan.mackenzie.org/macros/latex/contrib/sauerj/parcolumns.pdf).
- [2] Heiko Oberdiek: *The pdfcol package*; 2007/09/09;  
[CTAN:macros/latex/contrib/oberdiek/pdfcol.pdf](http://ctan.mackenzie.org/macros/latex/contrib/oberdiek/pdfcol.pdf).

## 6 History

[2007/07/26 v1.0]

- First version, published in the newsgroup [comp.text.tex](http://groups.google.com/group/comp.text.tex) with the name `parcolumns-colorstacks`: “[Re: xcolor glitches](http://groups.google.com/group/comp.text.tex/msg/56bd897b11bca414)”<sup>3</sup>

[2007/09/09 v1.1]

- CTAN version, package name renamed to `pdfcolparcolumns`.
- Uses package `pdfcol`.
- Documentation added.
- Test file added.

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<sup>3</sup>Url: <http://groups.google.com/group/comp.text.tex/msg/56bd897b11bca414>



[2008/08/11 v1.2]

- Code is not changed.
- URLs updated.

[2010/01/11 v1.3]

- Fix for rule color.
- New option `rulebetweencolor` for environment `parcolumns`.

## 7 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.

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