

# The pdfcolmk package

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## Abstract

This package tries a solution for the missing color stack of pdfTeX.

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## 1 Documentation

### 1.1 Introduction

This package uses a mark register in order to solve the problem of a missing color stack of pdfTeX prior 1.40.0. Since this version of pdfTeX a color stack is available and supported by pdfTeX.def 2007/01/01 v0.04a. In this case this package is obsolete and the package stops its loading.

## 1.2 Background

After the Dante meeting (Clausthal 2000) I have started to experiment with the eTeX method of a *colour* mark. One of the major problems is the understanding of the output routine and the need to rewrite it because of missing hooks. Currently I have made some tests in in onecolumn and twocolumn mode, but the state is experimental.

## 1.3 Limitations

- Mark limitations: page breaks in math.
- L<sup>A</sup>T<sub>E</sub>X's output routine is redefined.
  - Changes in the output routine of newer versions of LaTeX are not detected.
  - Packages that change the output routine are not supported.
- It does not support several independent text streams like footnotes.
- Limitations in float and marginpar support.

## 1.4 Recommendation

$\varepsilon$ -T<sub>E</sub>X (for additional mark register) Without  $\varepsilon$ -T<sub>E</sub>X L<sup>A</sup>T<sub>E</sub>X's mark commands are redefined to store an additional color value.

## 1.5 Usage

Load after package color:

```
\usepackage[pdftex]{color}  
\usepackage{pdfcolmk}
```

## 1.6 Compatibility

- Load the following packages after pdfcolmk:

```
mparhack.sty
```

- Load the following packages before pdfcolmk:

```
marn.sty  
newmarn.sty
```

- Supported \@addmarginpar patch:

```
latex/base/latex.ltx  
memoir.cls  
poemscol/marn.sty, poemscol/newmarn.sty  
mparhack.sty
```

- Unsupported \@addmarginpar patch:

```
lineno.sty  
sttools/marginal.sty  
revtex4.cls
```

## 2 Implementation

```

1 (*package)
Package identification.
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{pdfcolmk}%
4   [2007/01/01 v1.0 PDFtex COlor MarK (HO)]
5 \@ifundefined{ver@pdftex.def}{%
6   \PackageWarningNoLine{pdfcolmk}{%
7     Nothing to fix, because \string'pdftex.def\string' not loaded%
8   }%
9   \endinput
10 }{}
11 \@ifpackageloaded{color}{%{}%
12   \PackageWarningNoLine{pdfcolmk}{%
13     Nothing to fix, because \string'color.sty\string' not loaded%
14   }%
15   \endinput
16 }
17 \begingroup\expandafter\expandafter\expandafter\endgroup
18 \expandafter\ifx\csname main@pdfcolorstack\endcsname\relax
19 \else
20   % pdftex.def >= 2007/01/01 0.04a and pdfTeX >= 1.40.0
21   \begingroup
22     \let\on@line\@empty
23     \PackageInfo{pdfcolmk}{%
24       The color stack of pdfTeX \string>\string= 1.40 is used. %
25       Therefore\MessageBreak
26       this package is not necessary and not loaded%
27     }%
28   \endgroup
29   \expandafter\endinput
30 \fi
31
32 \PackageInfo{pdfcolmk}{%
33   This package tries to simulate dvips's color stack\MessageBreak
34   for pdfTeX based on a mark register of e-TeX.\MessageBreak
35   It redefines LaTeX's output routine. Therefore\MessageBreak
36   use with care, no warranties%
37 }
38
39 \ifx\marks\@undefined
40
41   \let\pec@mark\mark
42   \let\pec@value\empty
43   \long\def\mark#1{%
44     \protected@xdef\pec@value{#1}%
45     \pec@setmark
46   }
47   \def\pec@setmark{%
48     \begingroup
49       \@temptokena\expandafter{\pec@value}%
50       \pec@mark{\current@color}\the\@temptokena}%
51   \endgroup
52 }
53 \def\pec@getmark{%
54   \xdef\pec@botcolor{%
55     \expandafter\@firstofthree\botmark\@empty\@empty\@empty
56   }%
57 }
58 \long\def\@firstofthree#1#2#3{#1}%
59 \CheckCommand{\@leftmark}[2]{#1}

```

```

60 \CheckCommand{\@rightmark}[2]{#2}
61 \CheckCommand*{\leftmark}{%
62   \expandafter\@leftmark\botmark\@empty\@empty
63 }
64 \CheckCommand*{\rightmark}{%
65   \expandafter\@rightmark\firstmark\@empty\@empty
66 }
67 \long\def\@leftmark#1#2#3{#2}
68 \long\def\@rightmark#1#2#3{#3}
69 \g@addto@macro\leftmark\@empty
70 \g@addto@macro\rightmark\@empty
71
72 \else
73
74 \RequirePackage{etex}[1998/03/26]
75 \newmarks\pec@marks
76 \def\pec@setmark{\marks\pec@marks{\current@color}}
77 \def\pec@getmark{\xdef\pec@botcolor{\botmarks\pec@marks}}
78
79 \fi

```

## 2.1 \marginpar fix

```

80 \chardef\pec@result\z@
81 \def\pec@temp#1{%
82   \chardef\pec@result\@ne
83   \begingroup
84     \let\on@line\@empty
85     \PackageInfo{pdfcolmk}{%
86       Patch for \string\@addmarginpar\space applied (#1)%
87     }%
88   \endgroup
89 }

```

### 2.1.1 latex/base/latex.ltx

```

90 \def\pec@addmarginpar{%
91   \@next\@marbox\@currlist{%
92     \@cons\@freelist\@marbox
93     \@cons\@freelist\@currbox
94   }\@latexbug
95   \@tempcnta\@ne
96   \if@twocolumn
97     \if@firstcolumn
98       \@tempcnta\m@ne
99     \fi
100   \else
101     \if@mparswitch
102       \ifodd\c@page
103         \else
104           \@tempcnta\m@ne
105         \fi
106       \fi
107     \if@reversemargin \@tempcnta -\@tempcnta \fi
108   \fi
109   \ifnum\@tempcnta <\z@ \global\setbox\@marbox\box\@currbox \fi
110   \@tempdima\@mparbottom
111   \advance\@tempdima -\@pageht
112   \advance\@tempdima\ht\@marbox
113   \ifdim\@tempdima >\z@
114     \@latex@warning@no@line{Marginpar on page \thepage\space moved}%
115   \else
116     \@tempdima\z@
117   \fi

```

```

118 \global\@mparbottom\@pageht
119 \global\advance\@mparbottom\@tempdima
120 \global\advance\@mparbottom\dp\@marbox
121 \global\advance\@mparbottom\marginparpush
122 \advance\@tempdima -\ht\@marbox
123 \global\setbox\@marbox\vbox{%
124   \vskip \@tempdima
125   \box \@marbox
126 }%
127 \global \ht\@marbox \z@
128 \global \dp\@marbox \z@
129 \kern -\@pagedp
130 \nointerlineskip
131 \hb@xt@\columnwidth{%
132   \ifnum \@tempcnta >\z@
133     \hskip\columnwidth
134     \hskip\marginparsep
135   \else
136     \hskip -\marginparsep
137     \hskip -\marginparwidth
138   \fi
139   \box\@marbox \hss
140 }%
141 \nointerlineskip
142 \hbox{\vrule \@height\z@ \@width\z@ \@depth\@pagedp}%
143 }
144 \ifx\pec@addmarginpar\@addmarginpar
145   \pec@temp{latex/base}%
146 \fi

```

### 2.1.2 memoir.cls

```

147 \def\pec@addmarginpar{%
148   \checkoddpages
149   \@next\@marbox\@currlist{%
150     \@cons\@freelist\@marbox
151     \@cons\@freelist\@currbox
152   }\@latexbug
153   \@tempcnta\@ne
154   \if@twocolumn
155     \if@firstcolumn
156       \@tempcnta\m@ne
157     \fi
158   \else
159     \if@mparswitch
160       \ifoddpage
161       \else
162         \@tempcnta\m@ne
163       \fi
164     \fi
165     \if@reversemargin
166       \@tempcnta -\@tempcnta
167     \fi
168   \fi
169   \ifnum\@tempcnta <\z@
170     \global\setbox\@marbox\box\@currbox
171   \fi
172   \@tempdima\@mparbottom
173   \advance\@tempdima -\@pageht
174   \advance\@tempdima\ht\@marbox
175   \ifdim\@tempdima >\z@
176     \@latex@warning@no@line{%
177       Marginpar on page \thepage\space moved by \the\@tempdima
178     }%

```

```

179 \else
180   \@tempdima\z@
181 \fi
182 \global\@mparbottom\@pageht
183 \global\advance\@mparbottom\@tempdima
184 \global\advance\@mparbottom\dp\@marbox
185 \global\advance\@mparbottom\marginparpush
186 \advance\@tempdima -\ht\@marbox
187 \global\setbox\@marbox\vbox{%
188   \vskip \@tempdima
189   \box \@marbox
190 }%
191 \global \ht\@marbox \z@
192 \global \dp\@marbox \z@
193 \kern -\@pagedp
194 \nointerlineskip
195 \hb@xt@\columnwidth{%
196   \ifnum \@tempcnta >\z@
197     \hskip\columnwidth
198     \hskip\marginparsep
199   \else
200     \hskip -\marginparsep
201     \hskip -\marginparwidth
202   \fi
203   \box\@marbox
204   \hss
205 }%
206 \nointerlineskip
207 \hbox{\vrule \@height\z@ \@width\z@ \@depth\@pagedp}%
208 }%
209 \ifx\pec@addmarginpar\@addmarginpar
210   \pec@temp{memoir.cls}%
211 \fi

```

### 2.1.3 poemscol/marn.sty, poemscol/newmarn.sty

```

212 \def\pec@addmarginpar{%
213   \@next \@marbox\@currlist{%
214     \@cons\@freelist\@marbox
215     \@cons\@freelist\@currbox
216   }\@latexbug
217   \global\advance\@mpar@count\m@ne
218   \@ifundefined{@marn@the\@mpar@count @}{% was location logged last time?
219     \@tempcnta\@ne % NO: use original LaTeX logic
220     \if@twocolumn
221       \if@firstcolumn
222         \@tempcnta\m@ne
223       \fi
224     \else
225       \if@mparswitch
226         \ifodd\c@page
227         \else
228           \@tempcnta\m@ne
229         \fi
230       \fi
231       \if@reversemargin
232         \@tempcnta -\@tempcnta
233       \fi
234     \fi
235   }{%
236     \@tempcnta % YES: use record from last time to decide side.
237     \@nameuse{@marn@the\@mpar@count @}%
238     \if@reversemargin -\fi \@ne
239   }%

```

```

240 \ifnum\@tempcnta <\z@
241   \global\setbox\@marbox\box\@currbox
242   \global\let\@marnbottom\@mparbottoml
243 \else
244   \global\let\@marnbottom\@mparbottom
245 \fi
246 \@tempdima\@marnbottom \advance\@tempdima -\@pageht
247 \advance\@tempdima\ht\@marbox
248 \ifdim\@tempdima >\z@
249   \@@warning{Marginpar on page \thepage\space moved}%
250 \else
251   \@tempdima\z@
252 \fi
253 \global\@marnbottom\@pageht
254 \global\advance\@marnbottom\@tempdima
255 \global\advance\@marnbottom\dp\@marbox
256 \global\advance\@marnbottom\marginparpush
257 \advance\@tempdima -\ht\@marbox
258 \global\ht\@marbox\z@
259 \global\dp\@marbox\z@
260 \vskip -\@pagedp
261 \vskip\@tempdima\nointerlineskip
262 \hbox to\columnwidth{%
263   \ifnum \@tempcnta >\z@
264     \hskip\columnwidth
265     \hskip\marginparsep
266   \else
267     \hskip -\marginparsep
268     \hskip -\marginparwidth
269   \fi
270   \if@filesw % record where this is for use next time:
271     \@marn@log\@mpar@count
272   \fi
273   \box\@marbox
274   \hss
275 }%
276 \nobreak   %% RmS 91/06/21 \nobreak added
277 \vskip -\@tempdima
278 \nointerlineskip
279 \hbox{\vrule \@height\z@ \@width\z@ \@depth\@pagedp}%
280 }
281 \ifx\pec@addmarginpar\@addmarginpar
282   \pec@temp{poemscol/(new)marn.sty}%
283 \fi

```

#### 2.1.4 refman/refart.cls, refnam/refrep.cls

```

284 \def\pec@addmarginpar{%
285   \@next\@marbox\@currlist{%
286     \@cons\@freelist\@marbox
287     \@cons\@freelist\@currbox
288   }\@latexbug
289   \@tempcnta\@ne
290   \if@twocolumn
291     \if@firstcolumn
292       \@tempcnta\m@ne
293     \fi
294   \else
295     \@tempcnta\m@ne
296   \fi
297   \ifnum\@tempcnta <\z@
298     \global\setbox\@marbox\box\@currbox
299   \fi
300   \@tempdima\@mparbottom

```

```

301 \advance\@tempdima -\@pageht
302 \advance\@tempdima\ht\@marbox
303 \ifdim\@tempdima >\z@
304   \@@warning{Marginpar on page \thepage\space moved}%
305 \else
306   \@tempdima\z@
307 \fi
308 \global\@mparbottom\@pageht
309 \global\advance\@mparbottom\@tempdima
310 \global\advance\@mparbottom\dp\@marbox
311 \global\advance\@mparbottom\marginparpush
312 \advance\@tempdima -\ht\@marbox
313 \global\setbox\@marbox\vbox{%
314   \vskip \@tempdima \box \@marbox
315 }%
316 \global \ht\@marbox \z@
317 \global \dp\@marbox \z@
318 \kern -\@pagedp
319 \nointerlineskip
320 \hbext@\columnwidth{%
321   \ifnum \@tempcnta >\z@
322     \hskip\columnwidth
323     \hskip\marginparsep
324   \else
325     \hskip -\marginparsep
326     \hskip -\marginparwidth
327   \fi
328   \box\@marbox
329   \hss
330 }%
331 \nointerlineskip
332 \hbox{\vrule \@height\z@ \@width\z@ \@depth\@pagedp}%
333 }
334 \ifx\pec@addmarginpar\@addmarginpar
335   \pec@temp{ref(art|rep).cls}%
336 \fi
337
338 \ifcase\pec@result
339   \PackageInfo{pdfcolmk}{%
340     Fix for \string\@addmarginpar\space is omitted, %
341     because this variant\MessageBreak
342     of \string\@addmarginpar\space
343     is not recognized%
344   }%
345 \else
346   % apply patch for \@addmarginpar
347   \def\pec@PatchAddMarginpar#1\columnwidth#2#3\@nil{%
348     \pec@PatchAddMarginparI#2\@nil{#1}{#3}%
349   }%
350   \def\pec@PatchAddMarginparI#1\box\@marbox\hss#2\@nil#3#4{%
351     \def\@addmarginpar{%
352       #3%
353       \columnwidth{%
354         #1%
355         \pdfliteral{q}%
356         \rlap{%
357           \box\@marbox
358         }%
359         \pdfliteral{Q}%
360         \hss
361         #2%
362       }%

```



```

363     #4%
364   }%
365 }%
366 \expandafter\pec@PatchAddMarginpar\@addmarginpar\@nil
367 \fi

```

## 2.2 Color fix

```

368 \def\set@color{%
369   \pdfliteral{\current@color}%
370   \ifinner
371   \else
372     \pec@setmark
373   \fi
374   \aftergroup\reset@color
375 }
376 \def\reset@color{%
377   \pdfliteral{\current@color}%
378   \ifinner
379   \else
380     \pec@setmark
381   \fi
382 }
383
384 \let\pec@botcolor\current@color
385
386 \def\pec@PatchVBoxCCLV{%
387   \ifx\pec@botcolor\@empty
388   \else
389     \setbox\@cclv\vbox{%
390       \pdfliteral{\pec@botcolor}%
391       \unvbox\@cclv
392     }%
393   \fi
394   \pec@getmark
395 }
396
397 \def\pec@PatchAlreadyInBox{%
398   \ifx\pec@botcolor\@empty
399   \else
400     \pdfliteral{\pec@botcolor}%
401   \fi
402   \pec@getmark
403 }
404
405 \@ifclassloaded{memoir}{%
406   \expandafter\def\expandafter\mem@makecol\expandafter{%
407     \expandafter\pec@PatchVBoxCCLV
408     \mem@makecol
409   }%
410   \endinput
411 }{}
412
413 \@ifclassloaded{seminar}{%
414   \newcommand\pec@org@makeslide{}
415   \let\pec@org@makeslide\@makeslide
416   \def\@makeslide{%
417     \pec@PatchVBoxCCLV
418     \pec@org@makeslide
419   }%
420   \endinput
421 }{}
422

```

```

423 \long\def\pec@output#1\@specialoutput\else#2\pec@end{%
424   \begingroup
425     \def\x{#2}%
426   \expandafter\endgroup
427   \ifx\x\@empty
428     \PackageWarningNoLine{pdfcolmk}{%
429       Unexpected \string\output\space routine detected,%
430       \MessageBreak
431       loading of package stopped%
432     }%
433   \expandafter\endinput
434 \fi
435 }
436 \expandafter\expandafter\expandafter\pec@output
437 \expandafter\@firstofone\the\output\@specialoutput\else\pec@end
438
439 \long\def\pec@output#1\@specialoutput\else#2\pec@end{%
440   \output{%
441     #1\@specialoutput\else
442     \pec@PatchVBoxCCLV
443     #2%
444   }%
445 }
446 \expandafter\expandafter\expandafter\pec@output
447 \expandafter\@firstofone\the\output\pec@end
448 \endpackage

```

### 3 Installation

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

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

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

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

```
tex pdfcolmk.dtx
```

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

```

pdfcolmk.sty → tex/latex/oberdiek/pdfcolmk.sty
pdfcolmk.pdf → doc/latex/oberdiek/pdfcolmk.pdf
pdfcolmk.dtx → source/latex/oberdiek/pdfcolmk.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.

**Refresh file databases.** If your TeX distribution (TeX, MiKTeX, ...) rely on file databases, you must refresh these. For example, TeX users run `texhash` or `mktexlsr`.

#### 3.1 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 pdfcolmk.pdf unpack_files output .
```

---

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

**Unpacking with L<sup>A</sup>T<sub>E</sub>X.** The .dtx chooses its action depending on the format:

**plain-T<sub>E</sub>X:** Run docstrip and extract the files.

**L<sup>A</sup>T<sub>E</sub>X:** Generate the documentation.

If you insist on using L<sup>A</sup>T<sub>E</sub>X for docstrip (really, docstrip does not need L<sup>A</sup>T<sub>E</sub>X), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{pdfcolmk.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 pdfL<sup>A</sup>T<sub>E</sub>X:

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

## 4 History

[2000/08/27 v0.1]

- First published version (comp.text.tex, pdftex@tug.org).

[2000/09/02 v0.2]

- Next try.

[2000/09/02 v0.3]

- Solution without  $\varepsilon$ -T<sub>E</sub>X added.

[2000/09/06 v0.4]

- Patch commands added.
- Patch for seminar.cls added.

[2000/09/06 v0.5]

- Bug fix: initialization of \pec@value added.

[2005/06/15 v0.6]

- Support for dded. See thread in comp.text.tex (Message-ID: d86d3r\$kp\$1@news.BelWue.DE).

[2005/07/09 v0.7]

- Output support added for memoir, provided by Lars Madsen.

[2006/02/20 v0.8]

- Code is not changed.
- DTX framework.

[2007/01/01 v1.0]

- If `pdftex.def`  $\geq$  2007/01/01 v0.04a is used with pdfTeX 1.40.0, then package `pdfcolmk` is obsolete.

## 5 Index

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