

# The auxhook package

Heiko Oberdiek  
<oberdiek@uni-freiburg.de>

2007/04/06 v1.1

## Abstract

Package `auxhook` provides hooks for adding stuff at the begin of `.aux` files.

## Contents

<b>1</b>	<b>User interface</b>	<b>1</b>
<b>2</b>	<b>Implementation</b>	<b>2</b>
2.1	Identification . . . . .	2
2.2	Hook setup . . . . .	2
2.3	User macros . . . . .	2
2.4	Patches . . . . .	3
2.4.1	<code>\document</code> . . . . .	3
2.4.2	<code>\@include</code> . . . . .	3
<b>3</b>	<b>Installation</b>	<b>4</b>
3.1	Download . . . . .	4
3.2	Bundle installation . . . . .	4
3.3	Package installation . . . . .	4
3.4	Refresh file name databases . . . . .	5
3.5	Some details for the interested . . . . .	5
<b>4</b>	<b>References</b>	<b>5</b>
<b>5</b>	<b>History</b>	<b>6</b>
	[2006/05/31 v1.0] . . . . .	6
	[2007/04/06 v1.1] . . . . .	6
<b>6</b>	<b>Index</b>	<b>6</b>

## 1 User interface

There are two kinds of `.aux` files, the main `.aux` file and the `.aux` file that belongs to an included file, specified by `\include`.

Some packages write macros in the auxiliary files. If the user stops using the package, these macros will usually cause error messages because of unknown commands. Prominent example is package `babel`'s `\select@language`.

But such a package could be written more cooperative. It can also provide a definition in the auxiliary file (`\providecommand`) that silently disables the macros of the package if the package is no longer in use.

In case of the main auxiliary file, `\AtBeginDocument` can be used for this purpose. Especially if several packages are involved, the order cannot be controlled always (e.g., see package `hypdestopt` that hooks into `hyperref`'s macros). And there isn't any hook for the auxiliary files of the `\include` feature.

Thus this package patches L<sup>A</sup>T<sub>E</sub>X's macros `\document` and `\@include` to add the hooks where the auxiliary files are opened and the first line with `\relax` is written.

The patching can fail, if these macros are redefined by some other package. If the other package still uses the original definition, then load package `auxhook` earlier. (With `\RequirePackage` the package also can be loaded before the class). If the redefinition doesn't use the original meaning, then you can try to load package `auxhook` afterwards, but you need luck that the patch succeeds.

The hooks are macros:

**`\@beginmainauxhook`:** Start of the main auxiliary file. The hook is called after the first line with `\relax` is written.

**`\@beginpartauxhook`:** The same for the auxiliary files that belongs to the files that are included by `\include`.

If you want to add something to these hooks, you can use `\g@addto@macro` from L<sup>A</sup>T<sub>E</sub>X's kernel. But the package provides macros to add code that adds a line to the auxiliary file:

```
\AddLineBeginMainAux{\line}
\AddLineBeginPartAux{\line}
\AddLineBeginAux{\line}
```

The `\line` is added at the begin of the main auxiliary file by `\AddLineBeginMainAux` and at the begin of the auxiliary files of included files by `\AddLineBeginPartAux`. `\AddLineBeginAux` writes in both kinds of auxiliary files.

Examples, see packages `hypdestopt` ([1]) and `zref` ([3]).

## 2 Implementation

### 2.1 Identification

```
1 \*package
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{auxhook}%
4 [2007/04/06 v1.1 Hooks for auxiliary files (H0)]%
```

### 2.2 Hook setup

**`\@beginmainauxhook`** The hook for the main auxiliary file, initially empty.

```
5 \providecommand*\@beginmainauxhook{}
```

**`\@beginpartauxhook`** The hook for auxiliary files of included files, initially empty.

```
6 \providecommand*\@beginpartauxhook{}
```

### 2.3 User macros

**`\AddLineBeginMainAux`**

```
7 \newcommand{\AddLineBeginMainAux}[1]{%
8   \g@addto@macro\@beginmainauxhook{%
9     \immediate\write\@mainaux{#1}%
10  }%
11 }
```

**`\AtBeginPartAuxLine`**

```
12 \newcommand{\AddLineBeginPartAux}[1]{%
13   \g@addto@macro\@beginpartauxhook{%
14     \immediate\write\@partaux{#1}%
15  }
```

```

15 }%
16 }

\AddLineBeginAux

17 \newcommand{\AddLineBeginAux}[1]{%
18   \AddLineBeginMainAux{#1}%
19   \AddLineBeginPartAux{#1}%
20 }

```

## 2.4 Patches

### 2.4.1 \document

```

21 \begingroup
22   \@ifundefined{beamer@origdocument}{%
23     \def\auxhook@document{\document}%
24   }{%
25     \def\auxhook@document{\beamer@origdocument}%
26   }%
27   \long\def\y#1\immediate\write\@mainaux#2#3\auxhook@nil{%
28     \toks@{%
29       #1\immediate\write\@mainaux{#2}%
30       \@beginmainauxhook
31       #3%
32     }%
33     \expandafter\xdef\auxhook@document{\the\toks@}%
34     \endgroup
35   }%
36   \long\def\x#1\immediate\write\@mainaux#2#3\auxhook@nil{%
37     \toks@{#3}%
38     \edef\x{\the\toks@}%
39     \ifx\x@empty
40       \PackageWarningNoLine{auxhook}{%
41         Cannot patch \expandafter\string\auxhook@document,%
42         \MessageBreak
43         using \string\AtBeginDocument\space instead%
44       }%
45       \endgroup
46       \AtBeginDocument{%
47         \if@files
48           \@beginmainauxhook
49         \fi
50       }%
51     \else
52       \expandafter\expandafter\expandafter\y\auxhook@document
53       \auxhook@nil
54     \fi
55   }%
56   \expandafter\expandafter\expandafter\x\auxhook@document
57   \immediate\write\@mainaux{}\auxhook@nil

```

### 2.4.2 \@include

```

58 \begingroup
59   \long\def\y#1\immediate\write\@partaux#2#3\auxhook@nil{%
60     \endgroup
61     \def\@include##1 {%
62       #1\immediate\write\@partaux{#2}%
63       \@beginpartauxhook
64       #3%
65     }%
66   }%
67   \long\def\x#1\immediate\write\@partaux#2#3\auxhook@nil{%
68     \toks@{#3}%

```

```

69 \edef\x{\the\toks@}%
70 \ifx\x@empty
71   \PackageWarningNoLine{auxhook}{%
72     Cannot patch \string\@include,\MessageBreak
73     patch dropped%
74   }%
75 \endgroup
76 \else
77   \expandafter\y\@include{##1} \auxhook@nil
78 \fi
79 }%
80 \expandafter\x\@include{#1} \immediate\write\@partaux{}\auxhook@nil
81 \</package>

```

## 3 Installation

### 3.1 Download

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

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

[CTAN:macros/latex/contrib/oberdiek/auxhook.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  $\text{\TeX}$  Files” ([CTAN:tds/tds.pdf](#)). Directories with `texmf` in their name are usually organized this way.

### 3.2 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/
```

### 3.3 Package installation

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

```
tex auxhook.dtx
```

---

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

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

```
auxhook.sty → tex/latex/oberdiek/auxhook.sty
auxhook.pdf → doc/latex/oberdiek/auxhook.pdf
auxhook.dtx → source/latex/oberdiek/auxhook.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`.

### 3.4 Refresh file name databases

If your  $\TeX$  distribution (`teTeX`, `mikTeX`, ...) relies on file name databases, you must refresh these. For example, `teTeX` users run `texhash` or `mktextlsr`.

### 3.5 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 auxhook.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{auxhook.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 auxhook.dtx
makeindex -s gind.ist auxhook.idx
pdflatex auxhook.dtx
makeindex -s gind.ist auxhook.idx
pdflatex auxhook.dtx
```

## 4 References

- [1] Heiko Oberdiek: *The hypdestopt package*; 2006/05/30 v1.0; [CTAN:macros/latex/contrib/oberdiek/hypdestopt.pdf](#).
- [2] Sebastian Rahtz, Heiko Oberdiek: *The hyperref package*; 2006/08/16 v6.75c; [CTAN:macros/latex/contrib/hyperref/](#).
- [3] Heiko Oberdiek: *The zref package*; 2006/05/25 v1.2; [CTAN:macros/latex/contrib/oberdiek/zref.pdf](#).

## 5 History

[2006/05/31 v1.0]

- First version.

[2007/04/06 v1.1]

- Fix for class beamer.

## 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	
\@beginmainauxhook . . . . .	<u>5</u> , 8, 30, 48
\@beginpartauxhook . . . . .	<u>6</u> , 13, 63
\@empty . . . . .	39, <u>70</u>
\@ifundefined . . . . .	<u>22</u>
\@include . . . . .	61, <u>72</u> , 77, 80
\@mainaux . . . . .	9, 27, 29, 36, <u>57</u>
\@partaux . . . . .	14, 59, 62, 67, 80
<b>A</b>	
\AddLineBeginAux . . . . .	<u>17</u>
\AddLineBeginMainAux . . . . .	<u>2</u> , <u>7</u> , 18
\AddLineBeginPartAux . . . . .	12, 19
\AtBeginDocument . . . . .	43, <u>46</u>
\AtBeginPartAuxLine . . . . .	<u>12</u>
\auxhook@document . . . . .	23, 25, 33, 41, 52, <u>56</u>
\auxhook@nil . . . . .	27, 36, 53, 57, 59, 67, 77, 80
<b>B</b>	
\beamer@origdocument . . . . .	25
<b>D</b>	
\document . . . . .	23
<b>G</b>	
\g@addto@macro . . . . .	8, <u>13</u>
<b>I</b>	
\if@files . . . . .	47
\ifx . . . . .	39, <u>70</u>
\immediate . . . . .	9, 14, 27, 29, 36, 57, 59, 62, 67, 80
<b>M</b>	
\MessageBreak . . . . .	42, <u>72</u>
<b>N</b>	
\NeedsTeXFormat . . . . .	2
\newcommand . . . . .	7, 12, <u>17</u>
<b>P</b>	
\PackageWarningNoLine . . . . .	40, <u>71</u>
\providecommand . . . . .	5, 6
\ProvidesPackage . . . . .	3
<b>S</b>	
\space . . . . .	43
<b>T</b>	
\the . . . . .	33, 38, 69
\toks@ . . . . .	28, 33, 37, 38, 68, 69
<b>W</b>	
\write . . . . .	9, 14, 27, 29, 36, 57, 59, 62, 67, 80
<b>X</b>	
\x . . . . .	36, 38, 39, 56, 67, 69, 70, 80
<b>Y</b>	
\y . . . . .	27, 52, 59, 77