

# Running Headers for Endnotes\*

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## Abstract

`endheads` provides running headers of the form “Notes to pp. xx–yy” for endnotes. `endheads` is designed to work with `endnotes` and `fancyhdr`.

## Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Setup</b>	<b>1</b>
<b>3</b>	<b>Using <code>endheads</code> in a Multilingual World</b>	<b>2</b>
<b>4</b>	<b>Implementation</b>	<b>3</b>
4.1	General Purpose Routines . . . . .	3
4.2	Building Blocks . . . . .	4
4.3	User Code . . . . .	5

## 1 Introduction

It is a convenience, if you are flipping through the endnotes of a book, to be able to find the endnote you are looking for by looking at the running header. `endheads` uses the `\mark` mechanism to update the running header continuously, so that it always indicates to what pages in the main text the notes on a particular page refer. `endheads` also enables one to reset endnote numbering at the beginning of each chapter.

`endheads` requires the following packages to work correctly: `endnotes` (obviously), `fancyhdr` (also obviously), `ifthen` (for comparing page numbers), `needspace` (to prevent widowed chapter titles in notes sections when resetting notes by chapter using either `\notesbychapter` or `\resetendnotes`), and `titleref` (to send the chapter titles to the notes section).

## 2 Setup

`\setupendnoteheaders` This is the only macro you need to call to use this package. If you use

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\*This document corresponds to `endheads` 1.3, dated 12 December 2007.

`\setupendnoteheaders` you should remember to start your endnotes on a new page. `\setupendnoteheaders` sets the first page of the notes section to the `empty` pagestyle, since you normally don't have running headers on the first page of a section. And it changes the pagestyle for subsequent pages to have a running header of the form "Notes to pages xx–yy." This header will appear in the center of each header. Then it modifies the `\endnote` command, having it increment a counter that keeps track of all the endnotes (even if you are resetting the number by chapter), and defines a label for that note. Finally, it writes on the external file for the endnotes a command to set the `\mark` for that page of the endnotes using a `\pageref` to the label it has just defined. `endheads` creates a label and a `\pageref` for every note.

`\notesbychapter`

`\notesbychapter` resets the note counter every time you issue a `\chapter` command, and it puts a centered line reading "Chapter <chapter number> <chapter title>" in the notes at that point. If you want only the chapter number, not its title, issue `\titleinnotesfalse` in your preamble. Please note that `endheads` modifies `@chapter`, adding a few lines on to the end of the command. If some other package does the same, you will need to reconcile them.

`\setstyleforchaptersnotebegin`  
`\setstyleforchaptersnoteend`

`\setstyleforchaptersnotebegin` and `\setstyleforchaptersnoteend` allows you to customize the appearance of the line that separates chapters in the endnotes. If, for instance, rather having a centered line in the small font size, you want a flushleft line in the large fontsize, issue `\setstyleforchaptersnotebegin{\begin{flushleft}\large}` and `\setstyleforchaptersnoteend{\end{flushleft}}` in your preamble. To set these lines in italic or bold, issue `\setstyleforchaptersnotebegin{\em}` or `\setstyleforchaptersnotebegin{\bf}` in your preamble. (It's safe, indeed required, to use the old style font commands here, since the chapter title line in the notes is confined to a group, which restricts the scope of the font style command to the line.) Remember that if you open an environment with `\setstyleforchaptersnotebegin` you must close it in `\setstyleforchaptersnoteend`. So, for instance, if you wish the chapter line to be set flushleft, in boldface, in normal font size, you would issue `\setstyleforchaptersnotebegin{\begin{flushleft}\begin{bf}\normalsize}` and `\setstyleforchaptersnoteend{\end{bf}\end{flushleft}}` in your preamble.

`\resetendnotes`

Conceivably you might wish to do what `\notesbychapter` does for each chapter individually. For instance, there may be a chapter without endnotes, in which case `\notesbychapter` would issue the centered line for that chapter, but no notes would follow, which is ugly. Also, since the Bibliography is, as far as L<sup>A</sup>T<sub>E</sub>X is concerned, a chapter, you must use `\resetendnotes` before each chapter rather issuing `\notesbychapter` in the preamble if you have a bibliography, or odd results will follow.

### 3 Using endheads in a Multilingual World

`\changecontentsname`

By default, `endheads` uses English language running headers. As of version 1.2 these are easily changed.

`\changenotesname`

To change the name for the endnote section for notes (the default is Notes), issue `\changenotesname{your version}`. To change the running header (by default "Notes to") issue `\changenotesheader{your version}`.

`\changesinglepageabbrev`  
`\changemultiplepageabbrev`

To change the name for the notes in the table of contents ( by default “Notes”) issue `\changenotescontentsname{your version}`. Running headers refer to single pages with the English abbreviation “p.” and to multiple pages with the English abbreviation “pp.” To change these issue `\changesinglepageabbrev{new abbrev}` or `\changemultiplepageabbrev{new abbrev}` respectively. The ultimate outcome is to translate a header of the form “Notes to pp. xx-yy” to the form appropriate for your language.

## 4 Implementation

### 4.1 General Purpose Routines

Essentially these routines are code posted by Heiko Oberdiek to `comp.text.tex`. If you set a counter from a `\pageref`, that `\pageref` is undefined on the first run, and  $\text{\TeX}$  will not only complain about the undefined reference, but give a “missing number” error if you try to do anything with that reference, such as compare one page number to another. These commands enable one to use the `\pageref` without generating the missing number error on the first run.

```

1 \providecommand*\ifrefundefined}[1]{%
2   \expandafter\ifx\csname r@#1\endcsname\relax
3     \expandafter\@firstoftwo
4   \else
5     \expandafter\@secondoftwo
6   \fi
7 }
8 \providecommand*\@extract@ref}[2]{%
9   \expandafter\expandafter\expandafter#1\csname
10 r@#2\endcsname\endcsname\endcsname\@nil
11 }
12
13 \providecommand*\@extractref}{%
14   \@extract@ref\@car
15 }
16
17 \providecommand*\@extractpageref}{%
18   \@extract@ref\@secondcar
19 }
20
21 \long\def\@secondcar#1#2#3\@nil{#2}
22
23 \providecommand*\setcounterfromref}[2]{%
24   \ifrefundefined{#2}{%
25     \protect\G@refundefinedtrue
26     \@latex@warning{Reference ‘#2’ on page \thepage \space
27       undefined}%
28     \setcounter{#1}{0}%
29   }%
30   \setcounter{#1}{\@extractref{#2}}%
31 }%
32 }
33 \providecommand*\setcounterfrompageref}[2]{%

```

```

34 \ifrefundefined{#2}{%
35   \protect\G@refundefinedtrue
36   \@latex@warning{Reference ‘#2’ on page \thepage \space
37     undefined}%
38   \setcounter{#1}{0}%
39 }{%
40   \setcounter{#1}{\@extractpageref{#2}}%
41 }%
42 }
43 \long\def\appendtomacro#1#2{%
44 \begingroup
45   \toks@\expandafter{#1#2}%
46   \xdef#1{\the\toks@}%
47 \endgroup}

```

## 4.2 Building Blocks

First, define some counters:

```

48 \newcounter{allendnotes}
49 \setcounter{allendnotes}{1}
50 \newcounter{notepageholder}

```

`\mymarks` A command to set the marks. This will be called by the page style.

```

51 \newtoks{\singlepageabbrev}
52 \singlepageabbrev={p.}
53 \newcommand{\changesinglepageabbrev}[1]{\singlepageabbrev={#1}}
54 \newtoks{\multiplepageabbrev}
55 \newcommand{\changemultiplepageabbrev}[1]{\multiplepageabbrev={#1}}
56 \multiplepageabbrev{pp.}
57 \newcommand{\mymarks}{%
58   \ifthenelse{\equal{\firstmark}{\botmark}}{%
59     {\unskip ~\the\singlepageabbrev~\firstmark}% if equal
60     {\unskip ~\the\multiplepageabbrev~\firstmark--\botmark}}%if not equal

```

`\endnotespagestyle` A command to set the page style in fancyhdr. You might want to change some aspects of this, such as where to put the page number, to make it consistent with the rest of your document.

```

61
62 \newtoks{\endnotesname}
63 \endnotesname={Notes}
64 \newcommand{\changenotesname}[1]{\def\notesname{#1}}
65 \newtoks{\notesheadername}
66 \notesheadername={Notes to}
67 \newcommand{\changenotesheader}[1]{\notesheadername={#1}}
68 \newtoks{\notescontentsname}
69 \notescontentsname={Notes}
70 \newcommand{\changenotescontentsname}[1]{\textnotescontentsname={#1}}
71 \fancypagestyle{plain}{%
72 \fancyhf{}
73 \fancyhead[RO,LE]{\small\textrm{\thepage}}
74 \renewcommand{\headrulewidth}{0pt}
75 \renewcommand{\footrulewidth}{0pt}
76 }

```

```

77 \fancypagestyle{endnotesstyle}{%
78 \fancyhf{}
79 \fancyhead[CO]{\small{\em \the\notesheadername~\mymarks}}}
80 \fancyhead[CE]{\small{\em \the\notesheadername~\mymarks}}}
81 \renewcommand{\headrulewidth}{0pt}
82 \renewcommand{\footrulewidth}{0pt}
83 \fancyhead[RO,LE]{\small\textrm{\thepage}}}
84 }

```

`\checknoteheaders` This macro sets the counter `notepageholder` to the value given by the `pageref` of the note that is being output. All that strange business with `\string` is there because I want to use the `\immediate\write` mechanism to control what gets expanded and what doesn't get expanded on the external file for the endnotes, `\jobname.ent`. Everything except the actual number of the endnote is written to the external file as unexpanded tokens. When, after you call `\theendnotes`, you read in the external file for the endnotes, `\jobname.ent`, all these tokens become a command to set the `\mark`.

```

85 \newcommand{\checknoteheaders}{%
86 \string\setcounterfrompageref\string{notepageholder\string}%
87 \string{notl\theallendnotes\string}%
88 \string\mark\string{\string\thenotepageholder\string}%
89 }

```

### 4.3 User Code

`\setupendnoteheaders` `\setupendnoteheaders` turns on processing of running headers, and adds two lines to the definition of `\endnote`

```

90 \newif\ifendnoteheaderson \endnoteheadersonfalse
91 \newcommand{\setupendnoteheaders}{%
92 \endnoteheadersontrue
93 \if@enotesopen \else \@openenotes \fi
94 \immediate\write\@enotes{%
95 \string\thispagestyle\string{empty\string}
96 \string\pagestyle\string{endnotesstyle\string}}
97 \def\endnote{\@ifnextchar[\@xendnote{\stepcounter{endnote}%
98 % my addition begins
99 \stepcounter{allendnotes}\label{notl\theallendnotes}%
100 \immediate\write\@enotes{\checknoteheaders}%
101 % my addition ends
102 \protected@xdef\@theenmark{\theendnote}%
103 \@endnotemark\@endnotetext}}
104 \let\oldtheendnotes=\theendnotes
105 \renewcommand{\theendnotes}{%
106 \immediate\write\@enotes{\string\thispagestyle\string{endnotesstyle\string}}
107 \oldtheendnotes}
108 }

```

`\resetendnotes` Tells the `\chapter` macro to reset the note counter and to put a line with the chapter number in the endnotes.

```

109 \def\strip#1>{}
110 \newcommand{\literalendnote}[1]{\if@enotesopen \else
111 \@openenotes\setupendnoteheaders \fi
112 \begingroup

```

```

113         \def\next{#1}%
114         \newlinechar='40
115         \immediate\write\@enotes{\expandafter\strip\meaning\next}%
116     \endgroup%
117 }
118 \newif\iftitleinnotes \titleinnotesttrue
119 \newcommand{\styleforchapternotebegin}{%
120 }
121 \newcommand{\styleforchapternoteend}{%
122 }
123 \newcommand{\setstyleforchapternotebegin}[1]{%
124 \renewcommand{\styleforchapternotebegin}{#1}}
125 \newcommand{\setstyleforchapternoteend}[1]{%
126 \renewcommand{\styleforchapternoteend}{#1}}%
127 \setstyleforchapternotebegin{\begin{center}}
128 \setstyleforchapternoteend{\end{center}}
129 \newcommand{\resetendnotes}{%
130 \setcounter{endnote}{0}}%
131 \if@enotesopen \else \@openenotes \fi
132 \immediate\write\@enotes{\string\begin{group}}
133 \immediate\write\@enotes{\string\goodbreak}
134 \immediate\write\@enotes{\string\Needspace\string{5}\string\baselineskip\string}}
135 \immediate\write\@enotes{\string\styleforchapternotebegin}
136 % \immediate\write\@enotes{\string\begin\string{center}\string}}
137 %\immediate\write\@enotes{\string{}}
138 \immediate\write\@enotes{Chapter \thechapter\string~}
139 \iftitleinnotes
140 \immediate\write\@enotes{\string\title{ref}\string{chapter}\thechapter\string}}
141 \fi
142 %\immediate\write\@enotes{\string}}
143 \immediate\write\@enotes{\string\styleforchapternoteend}
144 % \immediate\write\@enotes{\string\end\string{center}\string}}
145 \immediate\write\@enotes{\string\nopagebreak}
146 \immediate\write\@enotes{\string\endgroup}
147 }

```

\notesbychapter

```

148 % \newcommand{\notesbychapter}{%
149 % \appendtomacro{\chapter}{%
150 % \relax
151 % \resetendnotes}%
152 % }
153 \newif\ifnotesbychapteron \notesbychapteronfalse
154 \newcommand{\notesbychapter}{\notesbychapterontrue}
155 \def\@chapter[#1]#2{\ifnum \c@secnumdepth >\m@ne
156     \if@mainmatter
157         \refstepcounter{chapter}%
158         \typeout{\@chapapp\space\thechapter.}%
159         \addcontentsline{toc}{chapter}%
160             {\protect\numberline{\thechapter}#1}%
161     \else
162         \addcontentsline{toc}{chapter}{#1}%
163     \fi
164 \else

```

```

165             \addcontentsline{toc}{chapter}{#1}%
166         \fi
167         \chaptermark{#1}%
168         \addtocontents{lof}{\protect\addvspace{10\p@}}%
169         \addtocontents{lot}{\protect\addvspace{10\p@}}%
170         \if@twocolumn
171             \@topnewpage[\@makechapterhead{#2}]%
172         \else
173             \@makechapterhead{#2}%
174             \@afterheading
175         \fi
176     \iftitleinnotes%
177     \label{chapter\thechapter}%
178     \fi%
179     \ifnotesbychapteron%
180     \relax%
181     \resetendnotes%
182     \fi}

```

## Change History

v1.0	guide	1
General: Initial version	v1.152	1
v1.1	General: Fixed strange white space error	1
General: uses needspace prevent orphan chapter beginnings in notes	v1.2	1
v1.15	General: Added commands for multilingual use	1
General: uses titleref to capture chapter titles for notes	v1.3	1
v1.151	General: Added commands for multilingual use	1
General: Corrections to user's		

## 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	
\@afterheading	174
\@car	14
\@chapapp	158
\@chapter	155
\@endnotemark	103
\@endnotetext	103
\@enotes	94, 100, 106, 115, 132–138, 140, 142–146
\@extract@ref	8, 14, 18
\@extractpageref	17, 40
\@extractref	13, 30
\@firstoftwo	3
\@ifnextchar	97
\@latex@warning	26, 36
\@makechapterhead	171, 173
\@nil	10, 21
\@openenotes	93, 111, 131
\@secondcar	18, 21
\@secondoftwo	5
\@thenmark	102
\@topnewpage	171
\@xendnote	97

<b>A</b>		<b>N</b>	
\addcontentsline	159, 162, 165	\Needspace	134
\addtocontents	168, 169	\newlinechar	114
\addvspace	168, 169	\newtoks	51, 54, 62, 65, 68
\appendtomacro	43, 149	\next	113, 115
<b>B</b>		\nopagebreak	145
\baselineskip	134	\notesbychapter	2, <u>148</u>
\begingroup	44, 112, 132	\notesbychapteronfalse	153
<b>C</b>		\notesbychapterontrue	154
\c@secnumdepth	155	\notescontentsname	68, 69
\changecontentsname	2	\notesheadername	65–67, 79, 80
\changemultiplepageabbrev	3, 55	\notesname	64
\changenotescontentsname	70	\numberline	160
\changenotesheader	67	<b>O</b>	
\changenotesname	2, 64	\oldtheendnotes	104, 107
\changesinglepageabbrev	3, 53	<b>P</b>	
\chapter	149	\protect	25, 35, 160, 168, 169
\chaptermark	167	\protected@xdef	102
\checknoteheaders	<u>85</u> , 100	\providecommand	1, 8, 13, 17, 23, 33
\csname	2, 9	<b>R</b>	
<b>E</b>		\refstepcounter	157
\end	128, 144	\resetendnotes	2, <u>109</u> , 151, 181
\endcsname	2, 10	<b>S</b>	
\endgroup	47, 116, 146	\setcounterfrompageref	33, 86
\endnote	97	\setcounterfromref	23
\endnoteheadersonfalse	90	\setstyleforchapternotebegin	2, 123, 127
\endnoteheadersontrue	92	\setstyleforchapternoteend	2, 125, 128
\endnotesname	62, 63	\setupendnoteheaders	1, <u>90</u> , 111
\endnotespagestyle	<u>61</u>	\singlepageabbrev	51–53, 59
<b>G</b>		\space	26, 36, 158
\G@refundefinedtrue	25, 35	\stepcounter	97, 99
\goodbreak	133	\strip	109, 115
<b>I</b>		\styleforchapternotebegin	119, 124, 135
\if@enotesopen	93, 110, 131	\styleforchapternoteend	121, 126, 143
\if@mainmatter	156	<b>T</b>	
\if@twocolumn	170	\textnotescontentsname	70
\ifendnoteheaderson	90	\the	46, 59, 60, 79, 80
\ifnotesbychapteron	153, 179	\theallendnotes	87, 99
\ifnum	155	\thechapter	138, 140, 158, 160, 177
\ifrefundefined	1, 24, 34	\theendnote	102
\iftitleinnotes	118, 139, 176	\theendnotes	104, 105
\ifx	2	\thenotepageholder	88
<b>L</b>		\thispagestyle	95, 106
\literalendnote	110	\titleinnotestru	118
\long	21, 43	\titleref	140
<b>M</b>		\toks@	45, 46
\m@ne	155	\typeout	158
\mark	88	<b>X</b>	
\meaning	115	\xdef	46
\multiplepageabbrev	54–56, 60		
\mymarks	<u>51</u> , 79, 80		